Work Group 2

South Coast Regional Stakeholder Group Process

Round 3 Array

Supplemental Document
September 22, 2009

Table of Contents

Narrative Rationale, Work Group 2
South Coast Regional Stakeholder Group Process
September 16, 2009

Designed to meet the intent and spirit of the Marine Life Protection Act (MLPA) and garner a broad range of cross-interest support, the Group 2 array includes some of the most biologically productive, rich and diverse marine habitats in the state.

Among many key habitats captured are lush kelp forests, rugged reef systems, submarine canyons, intertidal coastal stretches, surf grass beds, pinniped rookeries, avian roosting sites, estuaries and tidal flats. There are places where boat traffic is incessant, others where it is nearly non-existent. There are near-port areas that will no-doubt accommodate vigilant enforcement from many sources, and others so remote that compliance will depend, in part, on an honorable sense of "doing what's right."

The Group 2 proposal also retains many beloved heritage MPAs. Many were perhaps established "without a clearly defined purpose" (MLPA language), but have evolved to provide educational opportunities and the opportunity for the public to observe coastal ecosystems that have larger and more abundant organisms than they would if harvest of them were allowed. Retained Heritage MPAs also enjoy complementary local support and infrastructure, and support for educational and recreational opportunities.

The Group 2 array is also rooted in the notion of cross-interest support, efforts toward which were vigorously pursued throughout the step-wise, iterative MLPA process. As a result, it can be supported by public agencies, coastal water, wastewater and power agencies, professional and recreational fishing families, ports and harbors, trade and private NGOs, conservation groups, fish processors and markets, restaurateurs, educational organizations, ocean oriented businesses and recreational enthusiasts.

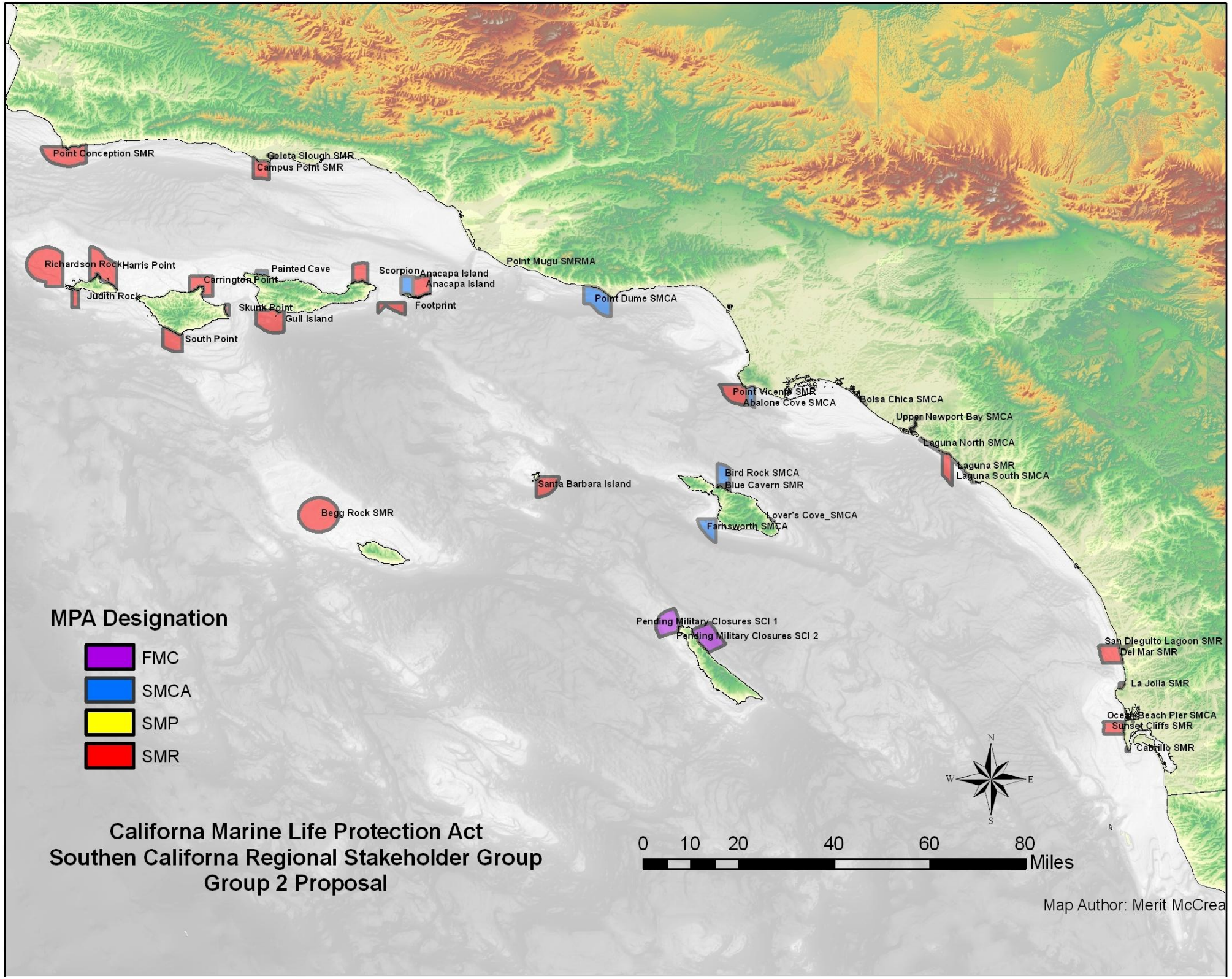
Group 2 endeavored to meet design guidelines while balancing them with socio-economic impacts, an equilibrium necessary to gaining the local support essential to MPA success. We considered Ecotrust's spatial analyses of fisheries value, plus modeling analysis from both the University of California at Davis and the University of California at Santa Barbara's bio-economic models. We also undertook exhaustive outreach to coastal-dependent entities to understand the socio-economic impacts to public essential services and industries that use areas under consideration for MPA's.

Based on this comprehensive effort, it is our firm conviction that any proposal resulting in higher socio-economic impacts than Group 2's proposal would result in failed ocean-dependent businesses, disrupted harbor operations and significant impacts to the century-old culture of our coastal communities.

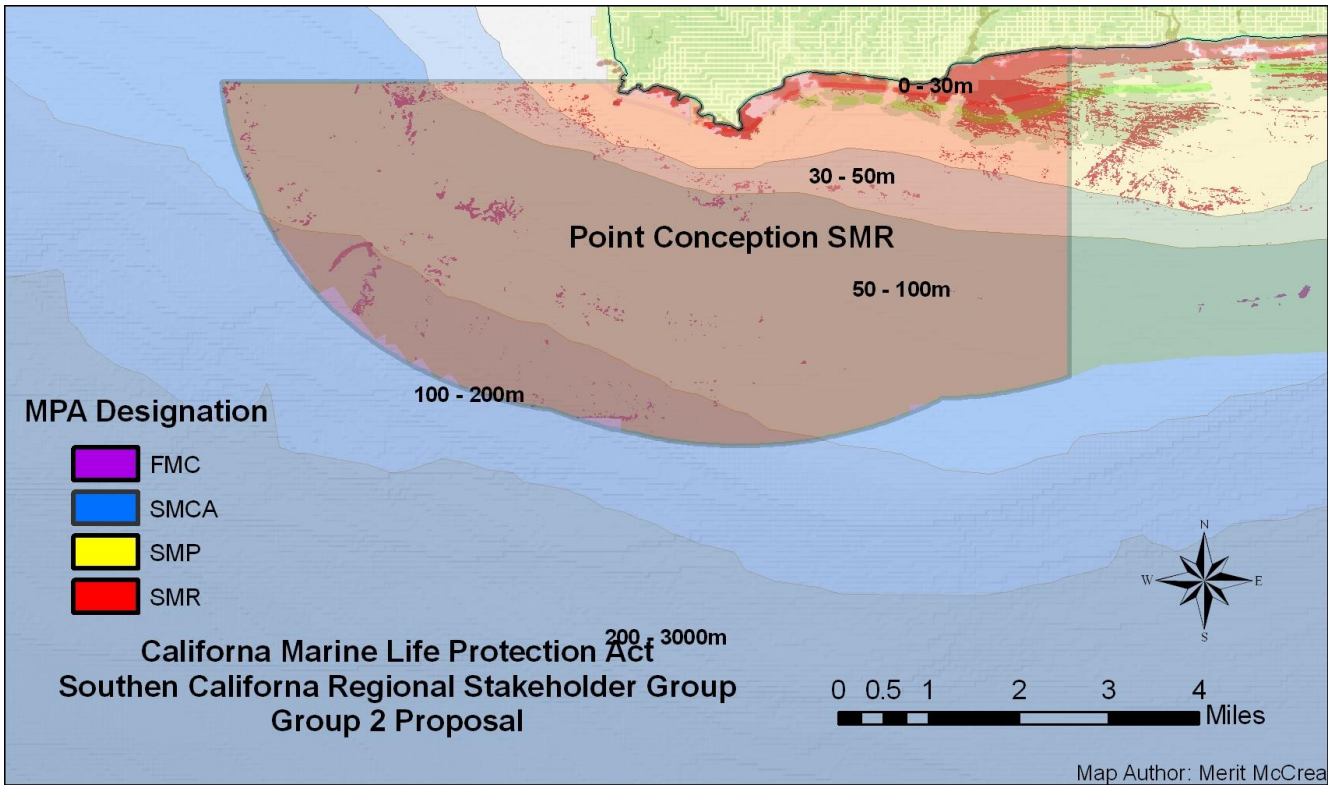
We believe Group 2's proposal meets the goals of the Act. However, given natural distributions of some "key" habitats and shortcomings of best readily available data (accuracy, completeness), several identified "key" habitat types were unavailable in sufficient

amount and within Science Advisory Team-identified benchmark distances. In some of these instances selection of the most proximal “replicates” of these habitats could not be feasibly accommodated without enduring unacceptable socio-economic impacts. In other cases, Group 2 members, whose local knowledge includes over 350 years of at-sea experience, were able to help bridge or correct those data gaps.

In conclusion, the Group 2 proposal includes key geographies and protects essential, iconic habitats necessary to advance goals of the MLPA and provide an efficient and effective MPA network in the South Coast Study Area. Its value is enhanced by the support it has received, from not only those who contributed to its design, but from the individuals, businesses and agencies upon whose cooperation and sacrifice it depends for success. Adoption of the Group 2 array will provide excellent conservation value, avoid undue, unnecessary socio-economic harm and ensure protected ocean parks for generations to come.



California Marine Life Protection Act
Southen California Regional Stakeholder Group
Group 2 Proposal



Point Conception/Humqaq SMR

1. Introduction

Designed to be the crown jewel of the California Marine Reserve system, this extremely large SMR is uniquely positioned to network with Central Coast reserves, Northern Channel Islands reserves and the robust UCSB marine reserve to the south. Located at the junction of two major bio-geographic regions and at the convergence of major, complex current systems, this high-diversity reserve contains numerous key marine habitats and numerous, varied geological substrates. It also contains scarce south-central California bird and marine mammal rookeries, as well as important Native American cultural areas, with associated intertidal and submerged archeological resources. There are significant negative socio-economic impacts to CPFV, spot prawn and hook-and-line rockfish fisheries and their clients.

2. Essential Facts: Point Conception/Humqaq SMR

a. Type of MPA: State Marine Reserve (SMR—all take prohibited)
- **NOTE:** This SMR is not intended to and will not regulate military activities. DFG and U.S. Department of Defense should coordinate regulatory language similar to Vandenberg SMR.

b. Boundaries: (per DFG feasibility guidelines):
   - Western Boundary: Due west from Point Conception Lighthouse to state boundary three miles offshore along latitude 34º 27 Minutes North.
   - Eastern Boundary: Due south on the longitude line 120º 24 Minutes West extending from mainland to state boundary three miles offshore.
   - Northern Boundary: Mean high tide line between eastern and western boundaries.
   - Southern Boundary: Offshore boundary of state waters.

c. Miles of Coverage:
   - 5 miles of shoreline.
   - 26 square miles

d. Habitats/Features (SAT Replication Guidelines):
   - Soft bottom (100-200 meters)
   - Deepwater habitat (>100 meters)
   - Medium-depth habitat (30-100 meters), hard and soft bottom habitat, including rocky reefs
   - Shallow-water habitat (<30 meters)
   - Extensive, persistent kelp beds (twice what is required)
   - Historic shipwreck,
   - Rocky and sandy-beach coastlines
   - Archeological resources
   - Windward and leeward shores
   - Oil seeps
   - Surf grass beds
   - Squid spawning area
   - White seabass nursery area
   - Significant aggregation area for leopard, soupfin and white sharks
   - One of a limited number of upwelling zones in southern region—high trophic interaction due to upwelling
   - Fed by pristine watershed

3. Site Rationale

a. Backbone MPA site
b. Plays important role in larval connectivity and ecological function of statewide and regional MPA networks
c. High conservation value; protects broad range of marine and cultural resources
d. Meets broad range of MLPA goals and objectives
e. Achieves balance between conservation and limiting socio-economic impacts
   - **NOTE:** Due to its rich habitat and biodiversity, combined with its lengthy distance from population densities of Southern California, this area has a substantial conservation benefit. *However*, its local socio-

economic impact to marine users is considerable, especially for lobster fishermen, CPFV operators and their clients, urchin divers, spot prawn trappers, hook-and-line nearshore fishermen and pelagic wetfish purse seine fishermen. Lightly populated onshore; pristine watersheds, significant distance from nearest harbor. Excellent location for marine research

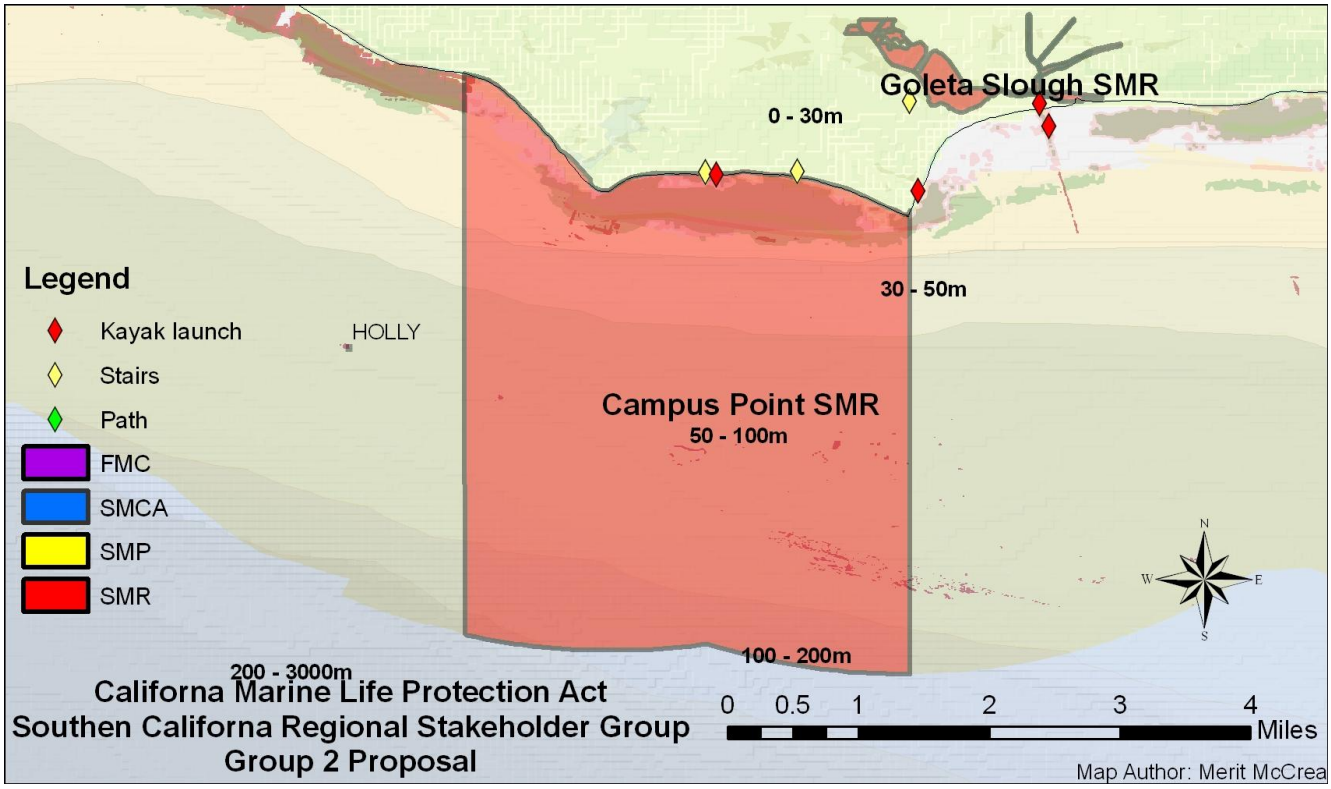
f. Small-boat recreational access from Gaviota Pier
g. Good area for eco-tourism
h. *Cross interest support*—This geography or a similar geography exists in all three proposals under RSG consideration, This MPA design resulted from extensive cross-interest negotiations. Consensus on this geography and a "paired" geography at Coal Oil Point (UCSB) is predicated on the assumption that there will be no other open-ocean coastal reserves up-coast of the Point Dume area.

4. Compliance with SAT Guidelines

a. Meets SAT size guidelines
b. Meets SAT guidelines to capture replicates for the following key habitats:
   - Beaches
   - Rocky intertidal
   - Hard bottom 30-100 meters
   - Rocky shallow reef 0-30 meter hard bottom proxy
   - Persistent kelp
   - Shallow soft bottom 0-30 meters
   - Soft bottom 30-100 meters
   - Soft bottom 100-200 meters
   - Total soft bottom habitat
   - Surf grass
c. Does not meet SAT habitat replication guidelines for:
   - Soft bottom 200-3,000 meters Insufficient depth in this region of state waters to meet this guideline. Closest coastal habitat for this replicate is 75 mile miles down-coast at Hueneme Canyon.
   - Hard bottom 100-3,000 meters Marinemap habitat data under represents this bottom type in this depth range for this array. Ecotrust commercial spot prawn trap data, as indicated on Marinemap, however, is a direct proxy for this habitat, and as such demonstrates compliance with SAT guidelines.

5. **Other Regulated Activities**

a. This SMR is not intended to and will not regulate military activities. DFG and U.S. Department of Defense should coordinate regulatory language similar to Vandenberg SMR.
b. The incidental take of fouling organisms associated with the normal cleaning and maintenance of mooring facilities or within this area is intended to be allowed.



Campus Point/Helo SMR

1. Introduction

This dynamic area located adjacent to the UCSB Marine Science Institute contains a wealth of key marine habitats, from one of the most persistent kelp beds to the second largest marine oil seep in the world. **Having served as an intensive research site for UCSB, its large reef structures provide an excellent analog for comparative study of the non-reserve area at Naples Reef**. Adjacent to a large student population, this SMR contains numerous access points for recreational activities including kayaking, surfing, bird watching, snorkeling and diving. In addition, beach access sites adjacent to this reserve provide opportunities for consumptive uses.

The product of cross-interest support, this backbone reserve is designed to network with the up-coast Point Conception/Humqaq reserve and the down-coast Point Dume reserve.

Socio-economic impacts of this reserve are significant, though it captures several key habitats. Backbone reserves like this, combined with existing reserves at the northern Channel Islands, represent the limit of acceptable concessions regional consumptive interests can “live with.”

2. Essential Facts: Campus Point SMR

a. Type of MPA: State Marine Reserve (SMR—all take prohibited)
b. Boundaries (per DFG feasibility guidelines):
    - Western Boundary: 119º 53.6" West
    - Eastern Boundary: 119º 50.7" West (running due south from Campus Point)
    - Northern Boundary: Mean high tide line between eastern and western boundaries.
    - Southern Boundary: Offshore boundary of state waters.
c. Miles of Coverage:
    - 3.1 miles of shoreline.
    - 10.1 square miles
d. Habitats/Features (SAT Replication Guidelines):
    - Oil seeps and asphaltum structure
    - Shoreline soft bottom
    - Soft bottom (100-200 meters)
    - Deepwater habitat (>100 meters)
    - Medium-depth habitat (30-100 meters), hard and soft bottom habitat, including rocky reefs
    - Shallow-water habitat (<30 meters)
    - Contains replicate for soft 30 meter proxy
    - Extensive, persistent kelp beds
    - Estuarine outflows
    - Home to significant harbor seal and sea lion populations
    - Migratory route of California Gray Whale
    - Migratory route for steelhead through Goleta Slough to San Jose Creek
    - Rock and sandy-beach coastlines
    - Offshore rocky pinnacle
    - Archeological resources
    - Windward and leeward shores
    - Surf grass beds
    - Pismo clam bed
    - Adjacent to snowy plover nesting site
    - Connectivity to Coal Oil Point Slough
    - Micro-current convergence zone (localized upwelling)
    - White seabass nursery area (per Dr. Larry Allen)

3. Site Rationale

a. Backbone MPA site
b. Plays important role in larval connectivity and ecological function of statewide and regional MPA networks
c. High conservation value; protects broad range of marine and cultural resources
d. Meets broad range of MLPA goals and objectives

e. Achieves balance between conservation and socio-economic impacts
    - **NOTE:** This high-value reserve, with significant conservation benefits and enhanced research opportunities comes with a high socio-economic cost. Adversely affected are commercial lobster fishermen, urchin fishermen, CPFV operators and their clients, private-vessel fishermen, crab fishermen, kelp harvesters and consumptive recreational divers.
f. Small-boat recreational access from Goleta Pier and Santa Barbara Harbor
g. Good area for eco-tourism
h. <u>*Cross interest support*</u>*—This geography or a similar geography exists in all three proposals under RSG consideration, This MPA design resulted from extensive cross-interest negotiations. Consensus on this geography and a "paired" geography at Point Conception is predicated on the assumption that there will be no other open-ocean coastal reserves up-coast of the Point Dume area.*

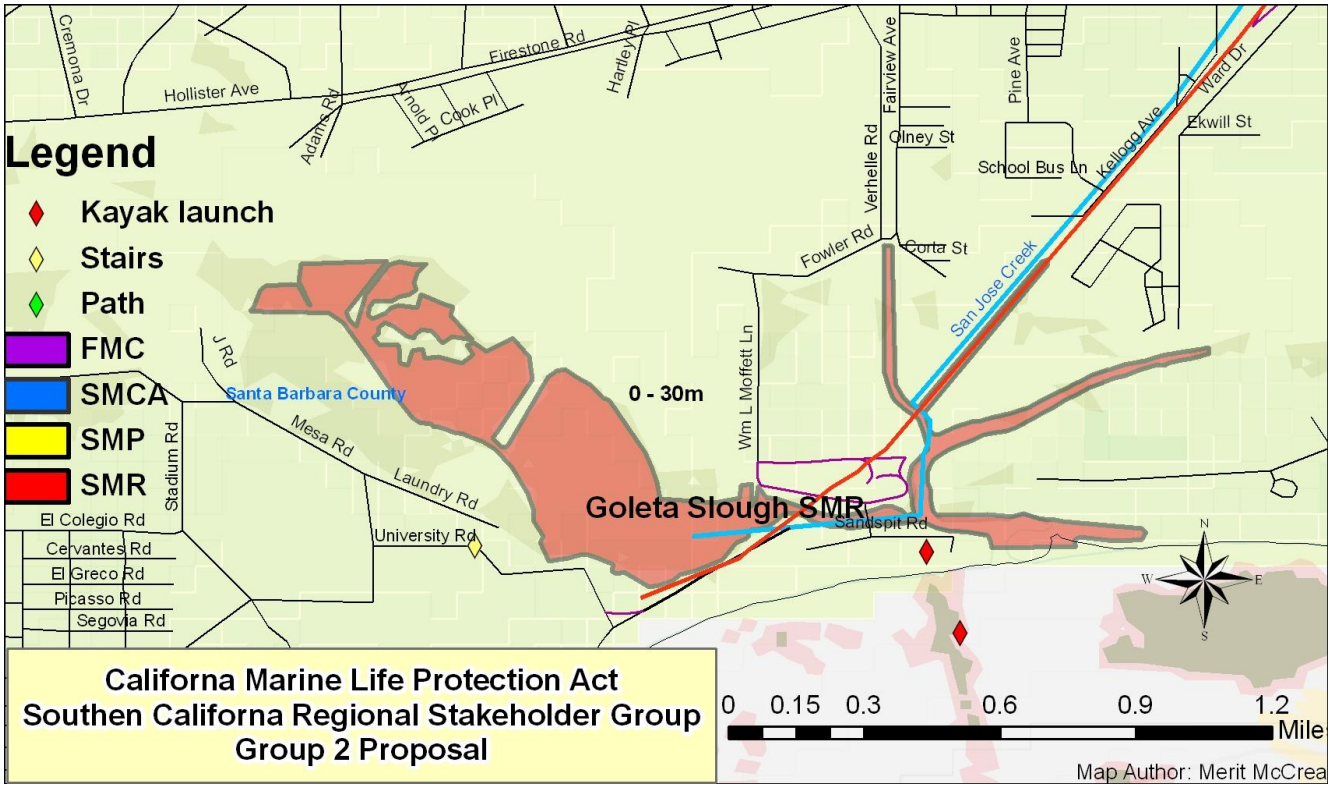
4. Compliance with SAT Guidelines

a. Meets SAT size guidelines
b. Meets SAT guidelines to capture replicates for the following key habitats:
    - Beaches
    - Rocky intertidal
    - Rocky shallow reef 0-30 meters hard bottom proxy
    - Persistent kelp
    - Shallow soft bottom 0-30 meter
    - Soft bottom 30-100 meter
    - Soft bottom 100-200 meter
    - Total soft bottom habitat
    - Surf grass
c. Misses SAT thresholds to capture the following:
    - <u>Spacing</u> The distance from this SMR to the up-coast Point Conception SMR is 33.6 miles, compliant with SAT guidelines. The distance from this reserve to the down-coat Point Dume reserve is 64.5 miles, non-compliant with SAT spacing guidelines by only 2.5 miles. This relatively minor shortfall presents no appreciable impact to the reserve network. Placing a meaningful reserve with significant conservation values between Campus Point and Point Dume, however, would create untenable adverse socio-economic hardships.
    - <u>Hard bottom 30-100 meter</u> This habitat exists in amounts exceeding those represented by Marinemap data and best readily available science. Personal communication and at-sea sampling of ocean habitat in the Campus Point SMR area by fishermen (logged anecdotal data) have thoroughly mapped and defined its bottom substrate. These empirical observations and accumulated knowledge indicate that the proposed Campus Point SMR meets SAT guidelines for this bottom type, and Marinemap data falls short of thoroughly documenting these features.

- Soft bottom 200-3,000 meters Insufficient depth in this region of state waters to meet this guideline; closest coastal habitat for this replicate is 42 mile miles down-coast at Hueneme Canyon.
- Hard bottom 100-3,000 meter Marinemap habitat data under represents this bottom type in this depth range for this array. Ecotrust commercial spot prawn trap data, as indicated on Marinemap, however, is a direct proxy for this habitat, and as such demonstrates compliance with SAT guidelines.

5. **Other Regulated or Allowed Activities:**

    a. Incidental take related to the normal maintenance and cleaning of marine fouling organisms from, or normal operation of any included existing hydrocarbon mining infrastructure as currently placed (2009).



Proposal and Rationale for Changing Goleta Slough State Marine Park to Goleta Slough State Marine Reserve

Description of existing Goleta State Marine Park:

Located at the terminus of the Goleta Valley watershed, the boundaries of the Goleta Slough SMP are the extent of estuary waters that lie within state waters. The inland boundaries are where the mean high tide line borders the following landmarks: The Atascadero Creek Rock Groin, the south end of the San Jose Creek Cement Flood Control Channel, the La Patera Creek/Fairview Avenue Bridge, and the Glen Annie Creek/Hollister Avenue Bridge. This SMR does not extend into the ocean beyond the intertidal zone.

Rationale for Change from State Marine Park to State Marine Reserve:

Per direction of the MLPA to review and then remove, retain or modify existing Marine Protected Areas (MPAs), it is recommended that the Goleta Slough State Marine Park be changed to Goleta Slough State Marine Reserve. The change from SMP to SMR will provide a more appropriate designation, given the desired level of protection.

The proposed Goleta Slough SMR is home to a persistent run of endangered steelhead trout, primarily up San Jose Creek. Its brackish, intertidal zone teems with a diverse assemblage of mollusks, crabs, grunion, tidewater gobies, and sticklebacks.

Non-native mullet are observed along with major seabird feeding and nesting areas. An effort to remove and replace non-native plants along its banks is ongoing.

There is an intent to allow activities as required under other law, wetland restoration activities, maintenance of adequate water circulation, required maintenance of existing infrastructure including bridges and pipelines, express intention for support of the issuance of permits as required to allow limited collecting for the purposes of education and research, express intent for the issuance of permits required to conduct small scale experimental manipulation for the purpose of scientific research, express intent not to increase the level of risk of liability otherwise inherent to the operation of the encircled Santa Barbara Airport facility or Goleta Sanitary District POTW.

Mugu Lagoon

Proposed: State Marine Recreational Management Area

Recommendation for Designation Rescinded by Group 2 (see item 4)

1. Introduction

The Mugu Lagoon is a known harbor seal rookery and haulout area, replicates of which are infrequent along the mainland coast. One of a limited number of estuarine habitats in the study area,the Lagoon serves as a nursery area for fish taken by recreational and commercial interests. Unmapped eelgrass beds occur here. The Lagoon also supports high seabird diversity and is a recognized "stopover" and rest site for migratory waterfowl. A SMRMA designation for Mugu Lagoon would provide a mechanism to promote inter-governmental monitoring and remediation efforts to restore this habitat, currently considered a contaminated site.

2. Level of Protection

No take allowed, except for waterfowl hunting under DFG regulation

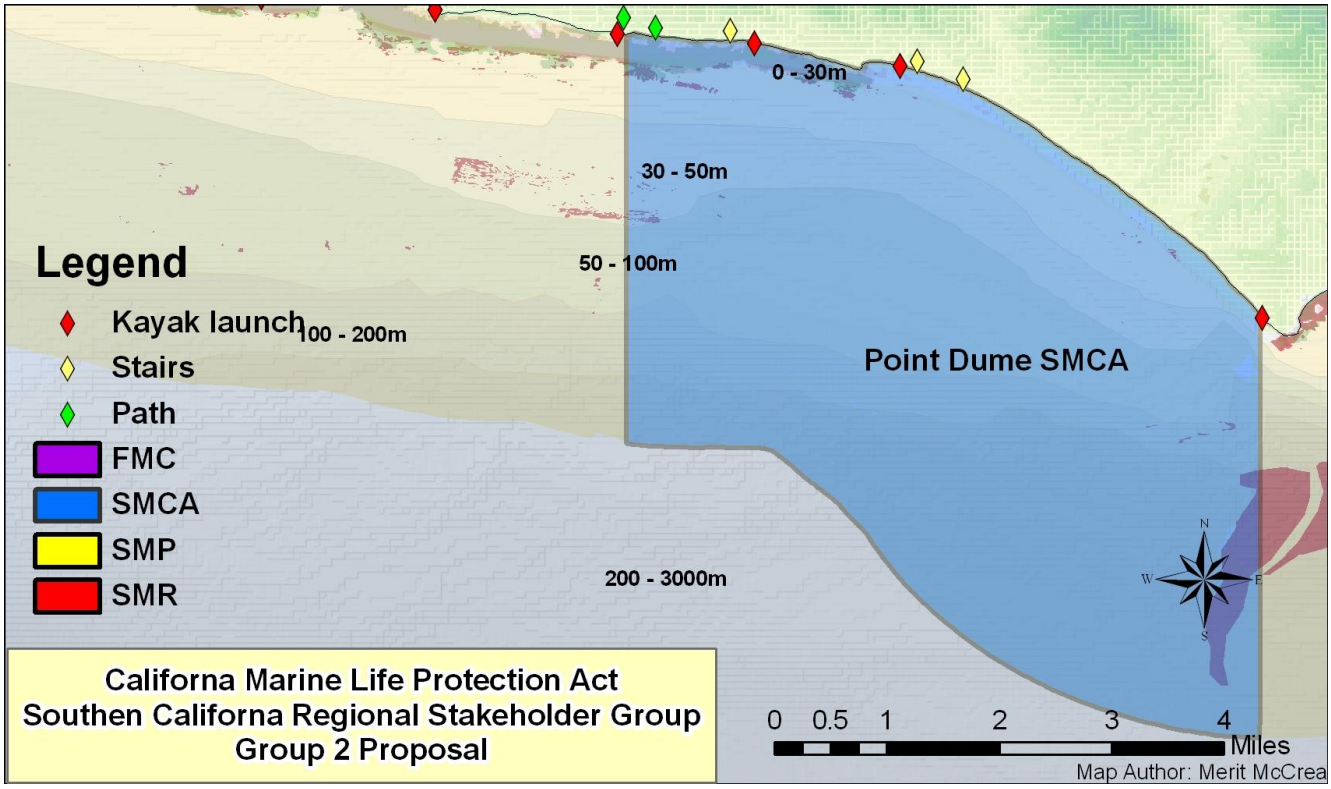
3. Boundary Description:

Includes whole estuary, as indicated in Marinemap.

- Western Boundary: To be described at discretion of DFG, to match Marinemap shape to the greatest extent practicable
- Eastern Boundary: To be described at discretion of DFG, to match Marinemap shape to the greatest extent practicable
- Northern Boundary: Highway 1 bridge.
- Southern Boundary: Southern terminus of Inland State Waters, as defined in Title 14

4. The Department of Defense does not formally oppose, but highly recommends avoiding designation of the Mugu Lagoon as a MPA for the following reasons:

- Mugu Lagoon is already closed to fishing and will continue to remain closed for the long-term.
- The closure is necessary because sediment in the lagoon is contaminated with pesticides and herbicides, including DDT from upstream.
- Multiple agencies are party to the closure under the CERCLA Action Memorandum Agreement dated 1997.
- An MPA would not add to this protection of the Mugu Lagoon. Management of this area would be best attained under the current group of agencies**.**



Point Dume SMCA

1. Introduction

This high-level protection SMCA is a pivotal geography within the region's MPA network. It is positioned to capture and protect a majority of key habitats defined by the Science Advisory Team (SAT). The Point Dume area is a backbone MPA element in all cross-interest RSG proposals. As a major headland with a deep submarine canyon component, the biodiversity of this MPA is top-tier with high conservation potential. The shape defined here represents some of the most difficult trade-offs among user groups in the study region.

2. Essential Facts: Point Dume SMCA

a. Type of MPA: State Marine Conservation Area (SMCA)

-

b. Boundaries: (per DFG feasibility guidelines):

- Western Boundary: Due south from a point east of El Pescador State Beach parking lot on the longitude line 118º 53.5 Minutes West extending from mainland to state boundary three miles offshore.
- Eastern Boundary: Due south on the longitude line 118º 48.6 minutes West. This north/south delineation commences at the eastern most

permanent brick restroom on the beach and extends three nautical miles offshore from the mean high tide line.
- Northern Boundary: Mean high tide line between eastern and western boundaries.
- Southern Boundary: Offshore boundary of state waters.

c. Miles of Coverage:
- 5.5 miles of shoreline.
- 20 square miles

d. Habitats/Features (SAT Replication Guidelines):
- Deep canyon soft and hard bottom habitat (>100 meters)
- Medium-depth habitat (30-100 meters), including a large area of soft bottom with small sections of rocky reef in the canyon
- Large area of sandy beach and soft shallow-water habitat (<30 meters)
- Extensive, persistent kelp beds
- Rocky inter-tidal, and rocky reef habitat
- Surf grass beds
- One of a limited number of canyon upwelling zones in southern region

e. Generally allowed takes for Point Dume SMCA:

• Pelagic finfish	Spearfishing	recreational
• Pacific bonito	Spearfishing	recreational
• Pacific bonito	Pelagic seine	commercial
• White seabass	Spearfishing	recreational
• Coastal pelagic finfish	Pelagic seine	commercial
• Coastal pelagic finfish	Dip net	commercial
• Coastal pelagic finfish	Dip net	recreational
• Jumbo squid	Hook and line	recreational
• Jumbo squid	Hook and line	commercial
• Market squid	Pelagic seine	commercial
• Market squid	Dip net	recreational
• Market squid	Dip net	commercial
• Swordfish	Harpoon	commercial

3. Site Rationale

a. Backbone MPA site
b. Plays important role in larval connectivity and ecological function of statewide and regional MPA networks
c. High conservation value; protects broad range of marine resources
d. Submarine canyon region is a significant aggregation area for pelagics such as white seabass, swordfish, thresher shark, squid, striped marlin and white sharks
e. Meets broad range of MLPA goals and objectives (see Marine Map)
f. Achieves MLPA conservation requirements while limiting, to the extent possible, negative socio-economic impacts to commercial and recreational consumptive interests.

- **NOTE:** With canyon upwelling near soft bottom habitat continuing into rocky reef with kelp beds, this area features substantial conservation benefit. *However*, negative socio-economic impact to marine users is considerable, especially lobster fishermen, CPFV operators out of Channel Island Harbor and their clients, urchin divers, and hook-and-line halibut fishermen. Plentiful public parking also makes this a valuable place for shore-based divers and anglers. Therefore leaving an open (non-MPA) area on the east end of the beach for consumptive beach access is important. The MPA, meanwhile, allows pelagic wetfish purse seine fishermen to continue harvesting due to the high LOP assigned that activity and the impact removing that access would have.

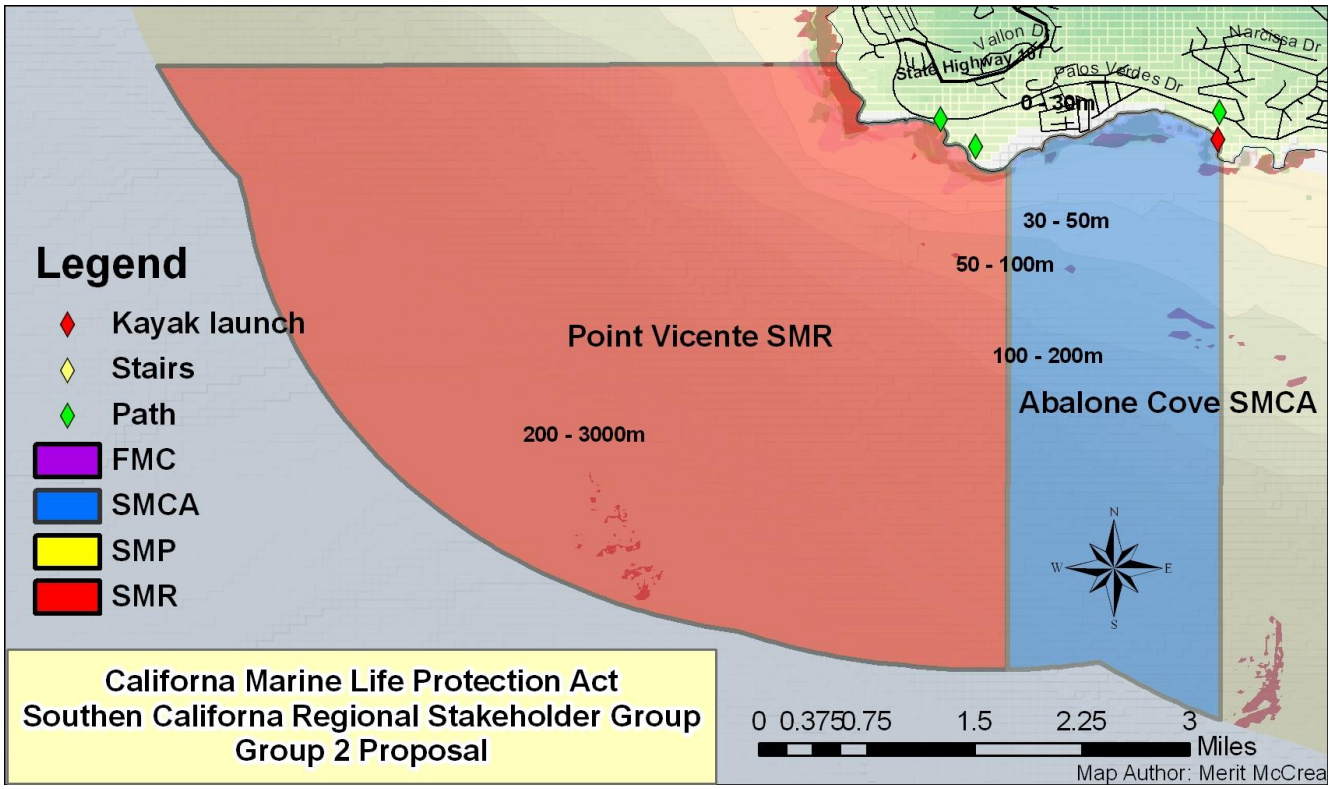
g. Over 2,000 parking spaces provide access from Zuma Beach
h. *Cross interest support*—A geography at Point Dume exists in the other two proposals under RSG consideration. This MPA design resulted from negotiations among several user groups. Due to safety issues--protection from wind and weather for small boaters, kayakers, and divers--plus access from Marina del Rey and the CPFV landing on the Malibu Pier, the west side of Point Dume was chosen for placement of this MPA. The maximum gap for many habitats exits between this MPA and the Coal Oil Point MPA.
    - **NOTE:** Suitable, sufficient habitat replicates do not exist in close enough proximity to this MPA to warrant creating another to shorten this gap.

4. Compliance with SAT Guidelines

a. Meets SAT size guidelines
b. Meets SAT guidelines to capture replicates for the following key habitats:
    - Beaches
    - Rocky intertidal
    - Rocky shallow reef 0-30 meter hard bottom proxy
    - Hard bottom 100-3,000 meters
    - Persistent kelp and Maximum kelp
    - Shallow soft bottom 0-30 meters soft bottom proxy
    - Soft bottom 30-100 meters
    - Soft bottom 100-200 meters
    - Soft bottom 200-3,000 meters
    - Total soft bottom habitat
    - Surf grass
c. Does not meet SAT habitat replication guidelines for:
    - Hard bottom 30-100 meters: Marinemap does not indicate sufficient rock habitat at this depth to meet this guideline. Closest coastal habitat for this replicate is 30 miles down-coast at Rocky Point in the South Mainland sub-bioregion. DEFICIANCY OF THAT HABITAT EVERYWHERE; However, local knowledge does suggest the

existence of sufficient amounts of that habitat within the proposal at the head of Pt. Dume sub-marine canyon.

d. Water Quality
    - Large area of Mugu Lagoon to Latigo Point is designated Area of Special Biological Significance.



Point Vicente SMR, Abalone Cove SMCA cluster

1. Introduction

Located at the only true headland (Palos Verdes Peninsula--ref. SAT definition) within the Southern Biogeographical Region (ref. Draft Master Plan) and the South Coast Study region, this Point Vincente SMR/Abalone Cove SMCA cluster captures all but 3 key habitats across a broad range of depths. It provides a high level of protection, at larger than preferred size (19.85 sq. statute miles) and solves the complex puzzle of accomplishing all of this within the most highly populated coastal county in all of California, while being mindful of the likelihood of extreme negative socioeconomic impacts to the surrounding ports, communities and coastal dependent entities.

2. Essential Facts: Point Vicente SMR, Abalone Cove SMCA cluster

a. Type of MPA: State Marine Reserve (SMR—all take prohibited)
   - **Note:**. Intent to permit monitoring and sampling activities required under other regulatory authority.

b. Boundaries: (Pt. Vicente SMR):
   - West Boundary: Latitude line is 33º 44.6 Minutes North
   - East Boundary: 118º 23.8 W Minutes West

- North Boundary: Mean High Tide line between east and west boundaries
- South Boundary: State water line between e3ast and west boundaries.

c. Boundaries: (Abalone Cove SMCA):
- West Boundary: Longitude line is 118º 23.8 Minutes West (Long Point)
- East Boundary: Longitude line is 118º 22.5 Minutes West (Portuguese Point)
- North Boundary: Mean High Tide line between east and west boundaries
- South Boundary: State water line between east and west boundaries

d. Combined Miles of Coverage at a high level of protection (SAT):
- 3.22 miles of shoreline.
- 19.85 square miles

e. Habitats/Features (SAT Replication Guidelines):
- Soft 100 - 200m 1.61 sq miles
- Soft 200 - 3000m 14.56 sq miles
- Surfgrass 2.53 miles
- Soft 30 - 100m 2.25 sq miles
- Soft All Depths 19.33 sq miles
- Hard 30 - 100m 0.03 sq miles
- Hard 100 - 3000m 0.03 sq miles
- Hard 30m Proxy 1.28 miles
- Kelp Persistence 0.21 miles
- Soft 30m Proxy 1.57 miles
- Rocky Shores 1.08 miles
- Beaches 2.14 miles

f. Generally allowed takes for Abalone Cove SMCA portion:
- Pelagic finfish Spearfishing recreational
- Pacific bonito Spearfishing recreational
- Pacific bonito Pelagic seine commercial
- White seabass Spearfishing recreational
- Coastal pelagic finfish Pelagic seine commercial
- Coastal pelagic finfish Dip net commercial
- Coastal pelagic finfish Dip net recreational
- Jumbo squid Hook and line recreational
- Jumbo squid Hook and line commercial
- Market squid Pelagic seine commercial
- Market squid Dip net recreational
- Market squid Dip net commercial
- Swordfish Harpoon commercial

2. Site Rationale

a. Backbone MPA site

b. Plays important role in larval connectivity and ecological function of statewide and regional MPA networks
c. High conservation value; protects broad range of marine resources
d. Meets broad range of MLPA goals and objectives
e. Reduced carbon footprint: Leaves accessible much of North Palos Verdes Peninsula to all traditional usages, including fishing. The bulk of comparable alternative fishing areas are more than twice as far from the local harbors that depend on this access. Although it is conceivable that overall fishing effort would be reduced instead, this is not the intended purpose of the Act.
f. From Pt. Vicente going south-east is a unique geographical region on the Palos Verdes peninsula that contains the highest water salinities and lowest water temperatures. Strong seasonal upwelling events occur in the late winter through the spring. Upwelling events lead to surface waters that are very close to 100% saturated with oxygen in the late spring this pattern continues through the late summer. Abundant phytoplankton blooms energize the food chain and provide the substrate for MPA biomass success.
g. Including Old Marine Land (long point) in the SMCA allows for the development of eco-tourism as this area. Long Point with its newly developed costal access can become a primer dive and kayak destination. Local community dive clubs that are primarily non consumptive, access this dive site on a regular basis already (in fact it has been nicknamed *the Sunday morning service dive* by the Dive Vets Scuba Club which dive this site every Sunday morning at 7AM)
h. There is ongoing mitigation work in this area aimed at restoring kelp habitat. Thus kelp habitat abundance is likely to increase. This MPA may benefit from improved habitat quality within it as this project continues and matures.
i. The persistently colder waters of south central PV supports MPA placement as this area may become one of special biological significance in generations to come due to climate change and ocean warming.
j. The south exposure and weather lee from Catalina Island offer unique protection for the vast majority of this MPA cluster. The unique geographical region is thus protected from the strong winter swell and storm patterns that dramatically reduce kelp forest growth in the northerly exposed areas of PV above Pt Vicente.
k. This Area of the Palos Verdes Peninsula is less exposed to the sedimentation and water quality issues that plague the Santa Monica Bay (including toxic red tidal blooms the result of organic loading from urban runoff which dramatically reduce light penetration for deep kelp growth and kill off large breading reef fish. Heavy metal urban runoff i.e. copper from brake pads also directly interferes with fish reproduction). These factors have been linked to the drastic 45% reduction in kelp over the last century within the Santa Monica bay.
l. Cross interest outreach with the Los Angeles County Sanitation District in allowing adequate distance from the Whites Point outfall.

m. Meets SAT recommendations for avoiding areas identified as problematic due to the Portuguese bend landslide and the EPA superfund site.
n. Human health risks are avoided by limiting consumption of demersal species identified to contain residual chemicals in this area. Conversely, placing any MPA in the area between Redondo and Point Vicente would displace a significant number of fishermen and concentrate fishing in remaining open areas where fish may contain unhealthy levels of residual chemicals (e.g White Point area).
o. Rocky inter-tidal and shallow rock habitats and caves provide shelter for many species. The area is also likely to contain unique hydrothermal vents and hydrocarbon seep habitats within it.
p. San Pedro's traditional [small-vessel] seine fleet and its associated markets depend on the Abalone Cove area extensively, therefore this high LOP activity will continue to be allowed there.
q. Enjoys cross interest support with the City of Redondo Beach and adherence to National Standard # 8 of the Magnuson-Stevens Fishery Conservation and Management Act with respect to the consideration of negative socio-economic impacts of regulation on local communities.

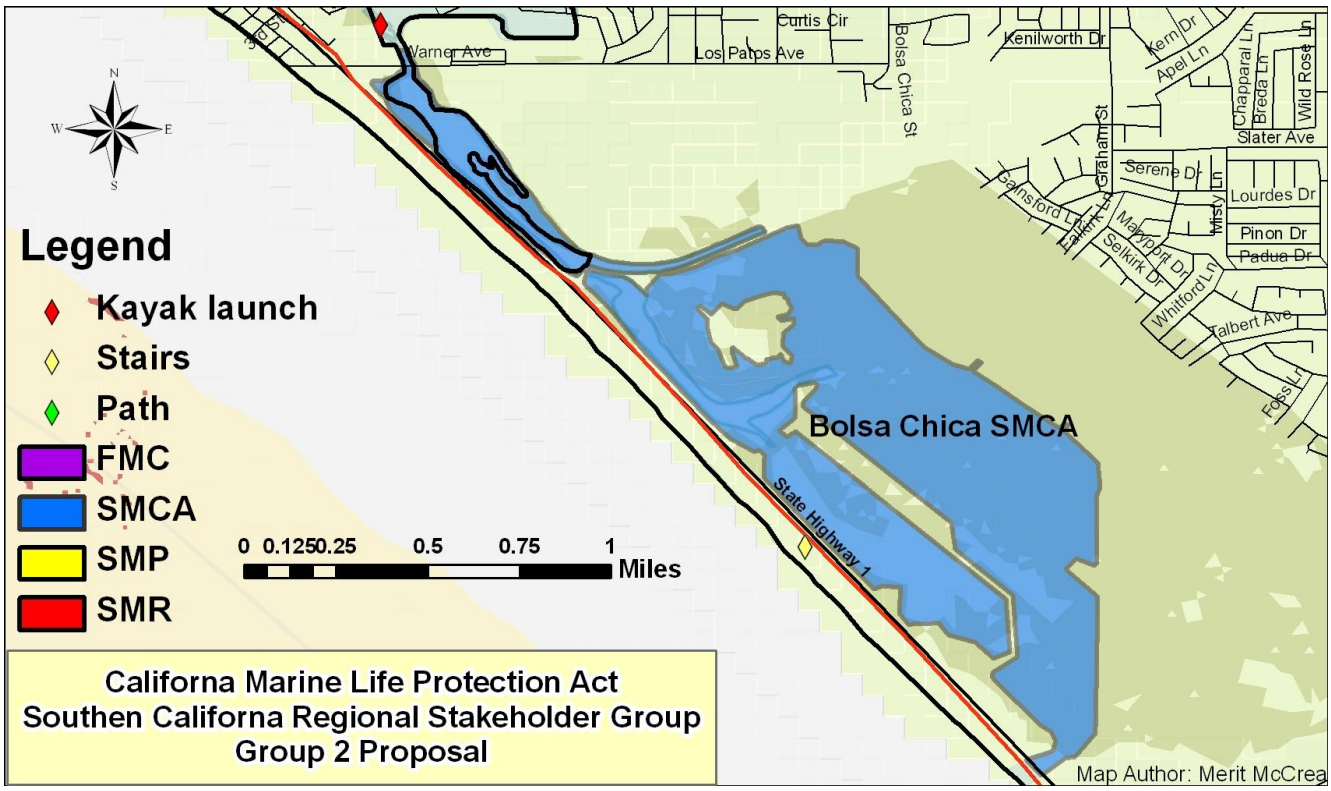
3. Compliance with SAT Guidelines (Re: Goals 1,2,6)

a. Meets SAT size guidelines at the "preferred" size level
b. Meets SAT guidelines to capture replicates for the following key habitats:
    - Soft 200-3000m
    - Surfgrass
    - Soft 30-100m
    - Soft All Depths
    - Hard 30m Proxy
    - Soft 30m Proxy
    - Rocky Shores
    - Beaches
    - Maximum Kelp

c. Does not meet SAT habitat replication guidelines for:
    - Hard 30-100m (Replicates of this habitat type are rare in our data. Although there is one of very few nearby, capturing it within a feasibly enforceable MPA showed to cause untenable negative socio-economic impacts for the local community)
    - Hard bottom 100-3,000 meters (Replicates of this habitat type are extremely rare within in our data. Although there is one of very few nearby, capturing it within a feasibly enforceable MPA proved to include areas of seafloor sediment that are the most contaminated in the world)
    - Persistent Kelp Proxy (SAT guidance threshold met for kelp habitat under the Maximum Kelp parameter)

4. Additional values:

a. The Point Vicente Interpretive Center and museum is a famous spot for observing migrating whales from shore looking south, due in part to its high elevation. This area has all the right conditions to attract large whale species: steep, deep drop-off coupled with robust upwelling.
b. Additionally, there is interpretive signage the California Coastal National Monument has placed on an east facing overlook at the Center, describing the ecological importance of the exposed offshore rocks there, which are under federal jurisdiction above mean high tide.



Bolsa Chica SMCA

1. Introduction

This recently restored wetland offers limited recreational fishing opportunities while protecting nursery habitats for several fish species such as halibut, and sand bass. Monitoring programs are in place due to restoration activities that recently concluded. Although currently designated as a State Marine Park, there is pre-existing wetlands management under California Department of Fish and Game authority as the Bolsa Chica Ecological Reserve. The Bolsa Chica Ecological Reserve is a nature reserve in the city of Huntington Beach, California. It is designated by the California Department of Fish and Game to protect a coastal wetland, with its resident threatened and endangered species. "Bolsa Chica" means "little pocket" in Spanish, as the area was part of a historic Mexican land grant named Rancho La Bolsa Chica (Bolsa Chica wiki). As with much of what little remains of California's native wetland habitats, this area was spared early development pressures by virtue of recreational water fowlers having defended it. This area was owned and staunchly defended from encroaching oil development by the Bolsa Chica Gun Club from 1899 to 1960. It was then acquired by Signal Landmark, with an eye for developing housing in this area. The League of Women Voters then played a critical role in advocating its preservation. In 1976 the NGO Amigos de Bolsa Chica was formed by constituents of the League of Women Voters, with a goal of preserving this wetland area for its intrinsic value. New progress was recently made through the construction and opening of a $100 million bridge overpass to allow an inlet from the Pacific Ocean to be built and opened to the

wetlands, allowing for the first time in over 100 years, the ocean waters to enter the wetlands located on the east side of Pacific Coast Highway. With the hopes of refreshing and restoring an integral and significant habitat key to this Pacific flyway stopover for endangered birds, the experiment was financed by the ports of Los Angeles and Long Beach, in trade for expansion and acquisition of additional coastal land for port use (Huntington Beach website).

2. Essential Facts: Bolsa Chica SMCA

a. Type of MPA: State Marine Conservation Area (SMCA)

b. Boundaries: (per DFG feasibility guidelines):
   - Waters below mean high tide line within the Bolsa Chica Ecological Reserve. The intent is for this MPA to cover the entire Bolsa Chica estuary (though this was not initially possible in MarineMap)

c. Miles of Coverage:
   - .72 square miles

d. Generally allowed takes
   - Shore fishing (any target) Hook and line recreational

e. Habitats/Features (SAT habiats):
   - Hardened Shores 0.85 miles
   - Estuary 0.72 sq miles

3. Site Rationale

a. Continues and enhances current protection of estuarine habitats already largely under protection as the Bolsa Chica Ecological Reserve.
b. Changes designation of and primary responsibility for this area from State Park authority to the Department of Fish and Game where it is more appropriate.
c. This site has at least three patron non-governmental organizations. One is the The Bolsa Chica Conservancy, a non-profit, non-political organization whose mission is to advocate the restoration and preservation of the Bolsa Chica Wetlands through public outreach, participation, education and leadership. It is self described as a coalition of responsible community leaders from science, business, education, and government (BCC). Others include Amigos de Bolsa Chica and the Bolsa Chica Land Trust.
d. This area offers some limited recreational shore fishing opportunity in designated areas, which would continue.
e. It addresses the following goals of the Marine Life Protection Act::

- **Goal 2**

To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.

- Objective 4

  Protect selected species and the habitats on which they depend while allowing: some commercial and/or recreational harvest of migratory, highly mobile, or other species; and other activities.

- **Goal 3**

  To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbances, and to manage these uses in a manner consistent with protecting biodiversity.

  - Objective 2

    Provide opportunities for scientifically valid studies, including studies on MPA effectiveness and other research that benefits from areas with minimal or restricted human disturbance.

  - Objective 3

    Provide opportunities for collaborative scientific monitoring and research projects that evaluate MPAs that promote adaptive management and link with fisheries management, seabird and mammals information needs, classroom science curricula, cooperative fisheries research and volunteer efforts, and identifies participants.

- **Goal 4**

  To protect marine natural heritage, including protection of representative and unique marine life habitats in south coast California waters, for their intrinsic value.

  - Objective 1

    Include within MPAs key and unique habitats identified by the MLPA Master Plan Science Advisory Team for this study region.

- **Goal 5**

  To ensure that south coast California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.

- Objective 1

  Minimize negative socio-economic impacts and optimize positive socio-economic impacts for all users including coastal dependent entities, communities and interests, to the extent possible, and if consistent with the Marine Life Protection Act and its goals and guidelines.

- Objective 3

  Effectively use scientific guidelines in the California Marine Life Protection Act Master Plan for Marine Protected Areas.

- Objective 4

  Ensure public understanding of, compliance with, and stakeholder support for MPA boundaries and regulations.

- Objective 5

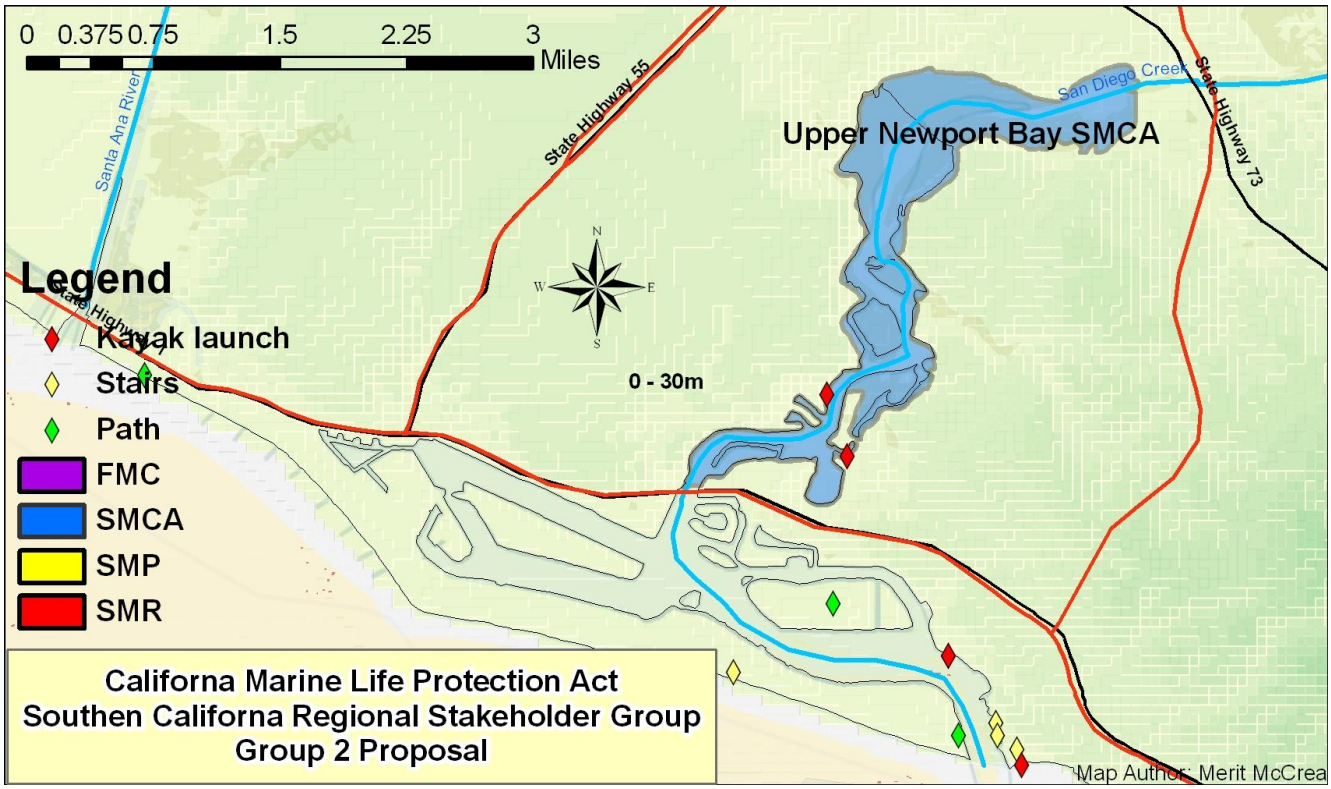
  Include simple, clear, and focused site-specific objectives/rationales for each MPA and ensure that site-level rationales for each MPA are linked to one or more regional objectives.

4. Compliance with SAT Guidelines

a. Confers protection of estuarine habitat in the South Coastal Bioregion of the Southern California Biogeographic region.

5. Other Regulated Activities

a. Boating, swimming, wading, and diving are prohibited. Entry times and accessible areas are controlled by the managing entity. Limited management activities are consistent with current regulations. Extractive activities are limited to designated areas around outer Bolsa Bay.
b. This estuary has undergone extensive and continuing remediation. These activities should be allowed to continue with appropriate permitting.



Upper Newport Bay SMCA

1. Introduction

This wetland currently under restoration/dredging activities offers limited recreational fishing opportunities while protecting nursery habitats for several fish species such as halibut, and sand bass. Monitoring programs are in place due to restoration activities that are ongoing. It supports a variety of resident and transient wildlife, some species of which have been identified as in need of special protections. It is the site of the Upper Newport Bay Ecological Reserve and is supported by a patron organization of volunteers. The Newport Bay Naturalists and Friends (NBNF) is an organization composed of more than 2,000 members dedicated to protecting and restoring Upper Newport Bay's native habitat. Upper Newport Bay is one of the largest remaining saltwater marshes in Southern California. It is a major stopping place along the Pacific flyway and hosts as many as 30,000 birds of 200 species. In 1992, more than 70 percent of the nation's remaining light-footed clapper rail population occurred and bred in this estuary.

2. Essential Facts: Upper Newport Bay SMCA

a. Estuarine habitat replicate within the South Coastal Bioregion
b. Generally allowed takes
   - Shore fishing — Hook and line — recreational
   - Finfish — Hook and line — recreational
c. Boundaries:

- Seaward boundary extends to the Pacific Coast Highway. The inland boundary extends to Jamboree Road.

2. Site Rationale

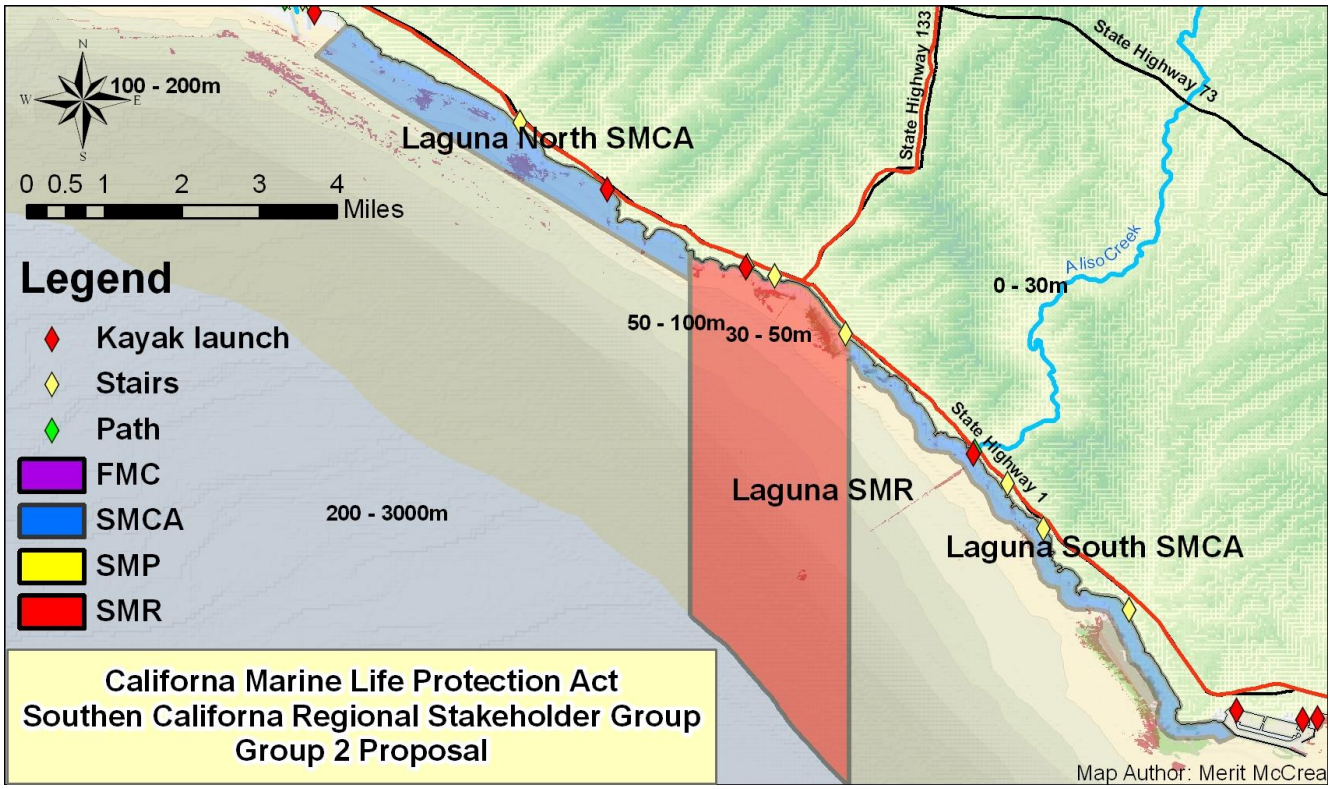
a. Has strong local support
b. Provides protection from fishing impacts, most notably those that alter habitat, such as the harvest of invertebrate species.
c. Provides continued limited recreational fishing opportunity, for example local fishing clubs sponsor kids fishing events here.
d. Provides a focus for continued conservation efforts, education and outreach.
e. Has evolved supporting infrastructure and an interpretive center.
f. This wetland currently under restoration/dredging activities offers limited recreational fishing opportunities while protecting nursery habitats for several fish species such as halibut, and sand bass. Monitoring programs are in place due to restoration activities that are ongoing.

3. Compliance with SAT Guidelines

a. Offers protection to 1.284 sqmi of estuarine habitat, meeting guideline thresholds for this habitat type.

4. Design Considerations

a. This wetland currently under restoration/dredging activities and as such it is the express intent of the proposers that such activity be permitted to continue as allowed under other regulatory authority.
b. Limited low impact take as allowed under DFG permitting for educational and research activities to be supported.
c. Attempted to include the marsh area on the south end of Shellmaker Island and all water inland from that point, excluding the area that goes under Jamboree road. The area intends to protect the south end of Shellmaker Island to North Star Beach at (33 degrees 37.380 minutes)
d. Due to the comments made in State Parks guidance document, this area designation has been changed to an SMCA. Local resources manage and enforce regulations in this MPA area.
e. Restrictions exist regarding: swimming areas, boat speed, shoreline access and access fees. These are intended to continue.
f. Intended to allow routine maintenance, dredging, monitoring, research and education, and habitat restoration to continue.



Laguna North SMCA

1. Introduction

This is strictly a goal 3 MPA emphasizing inter-tidal/tide pool protection with monitoring and enforcement provided by local agencies and government officials. Please see www.ocmarineprotection.org for information about the goals of Orange County inter-tidal protection areas. Intent is to have an SMCA that covers the State lands commission lease and accommodate Parks services request to move beyond 1000feet offshore, as advised by DFG. Protects intertidal species. Take of species generally not associated with tide pool areas is to be permitted while providing tide pool specie protection.

2. Essential Facts: Laguna North SMCA

a. Type of MPA: State Marine Conservation Area

b. Boundaries: (per DFG feasibility guidelines):
- Approximates state parks land lease boundary along depth contour to simplify regulations. Straight lines connecting the following points
- North shoreline coord: 33.35.417 ; 117.52.229

- North Offshore coord: 33.35.087; 117.52.577
- South shoreline coord: 33.32.896 ; 117.48.387
- South offshore coord: 33.32.572 ; 117.48.386

c. Miles of Coverage:
   - Coastline-5.58 mi.
   - Area- 2.23 sqmi.

d. Generally allowed takes

• Sea cucumber	Diving	commercial
• Lobster	Trap	commercial
• Lobster	Hoop net	recreational
• Lobster	Diving	recreational
• Urchin	Diving	commercial
• Rock crab	Trap	commercial
• Rock crab	Hoop net	recreational
• Finfish	Hook and line	recreational
• Finfish	Hook and line	commercial
• Finfish	Spearfishing	recreational

e. Habitats/Features

• Surfgrass	3.84	miles
• Hard 30m Proxy	0.80	miles
• Soft 30m Proxy	4.10	miles
• Beaches	3.28	miles
• Rocky Shores	2.30	miles
• Kelp Maximum	0.08	miles
• Unknown 0 - 30m	0.60	sq miles
• Soft 30 - 100m	0.31	sq miles
• Soft All Depths	1.46	sq miles
• Hard 30 - 100m	0.02	sq miles

3. Site Rationale

a. Helps sustain, conserve, and protect marine life populations.
b. Improves recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.
c. Protects marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value.
d. Helps ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement.

4. Provenance and Design Considerations

a. Modified the existing boundaries of Crystal Cove SMCA and simplified take regulations. Very important as a goal 3 MPA as local educational programs and enforcement efforts maintain this area. Boundaries have been created following feasibility guidelines of recognizable points and offshore whole minute lat/long corner connected by straight lines. Main goal is to preserve protection of inter-tidal species which local educational, recreational, and enforcement activities are based. Offshore distance is not a large concern due to allowed uses recreational and commercial take. Activities allowed/performed in the area are not inconsistent with recreational opportunities which are goals of State Parks. Local Docents, signage, education, literature and land based enforcement protect the area of terrestrial access in which species requiring protection exist.
b. Trampling of inter-tidal species may be limited by local enforcement agencies.

4. Other: This is a heritage MPA. It is established for the maintenance of public access to view and experience a high abundance of indigenous marine organisms within an easily accessible area. Recommendation that it must have a sponsor agency or group that provides the following:

a. Seaward boundary markers (buoys) at no less than three to a mile.
b. On shore markers at the shore-side boundaries and coastal access points with the prohibited takes that would otherwise be allowed, listed.
c. Some measure of local enforcement, minimally a docent program of public outreach volunteers that provide information to the public and can report infractions to local law enforcement. This program should put at least one person in the area during most daylight hours. This area has a sponsor group that does this already. It is intended that a filled, dedicated full-time non-DFG local peace officer position will satisfy this requirement.
d. This is a Goal 3 motivated heritage MPA that doesn't otherwise meet the feasibility guidelines well.

Laguna Beach SMR

1. Introduction

The Laguna SMR is part of this array's backbone of MPA's. This proposed MPA would protect the area from fishing, reef habitats will benefit and this is one of the most beautiful sections of the Orange County coast. In addition, this site choice reflects the core of the area that local residents commented they would like to see protections for. It has ample access for those who would like to visit and experience natural abundances of the species likely to benefit from such protections. It is designed to meet the SAT guidance for spacing and habitat replication guidelines for most key habitats. However, due to the rarity of certain habitats within the subregion some habitat guidelines are not met. One habitat that is short of being a "replicate," is so by being short merely 4 % of the threshold value. Specifics are delineated under "habitat replication notes" below.

This MPA represents major sacrifices by all consumptive users. The coastline distance between Newport and Dana harbors is comprised of only 12 miles, of that available coastline, over 3 miles of it is incorporated into this SMR (25% of the available coast). This MPA meets the minimum SAT guidelines, any additional area would present severe socioeconomic impacts for the area for recreational, commercial and local businesses.

2. Essential Facts: Laguna Beach SMR

a. Type of MPA: State Marine Reserve (SMR—all take prohibited)
b. Boundaries: (per DFG feasibility guidelines):
   - Western Boundary: 117.48.4 W
   - Eastern Boundary: 117.46.6 W
   - Northern Boundary: Mean High Tide
   - Southern Boundary: Out to state waters
c. Miles of Coverage:
   - 2.58 miles of shoreline.
   - 9.18 square miles
d. Generally allowed takes
   - None, only as allowed under special permit.
e. Habitats/Features (SAT Replication Guidelines):
   - Soft 100 - 200m 1.63 sq miles
   - Soft 200 - 3000m 4.37 sq miles
   - Surfgrass 1.71 miles
   - Soft 30 - 100m 2.14 sq miles
   - Soft All Depths 8.76 sq miles
   - Hard 100 - 3000m 0.01 sq miles
   - Hard 30m Proxy 1.24 miles

- Soft 30m Proxy 1.27 miles
- Rocky Shores 0.98 miles
- Beaches 1.60 miles

3. Site Rationale

a. Backbone MPA site
b. Plays important role in larval connectivity and ecological function of statewide and regional MPA networks
c. High conservation value; protects broad range of marine and cultural resources
d. Strong local political will and support for targeting the Laguna Beach as a SMR site
e. Meets broad range of MLPA goals and objectives
    i. Protects the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.
    ii. Helps sustain, conserve, and protect marine life populations, including those of economic value.
    iii. Improves recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.
    iv. Helps ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.
    v. Helps ensure that the state's MPAs are designed and managed, to the extent possible, as a network.
f. Achieves balance between conservation and limiting socio-economic impacts
g. Good area for eco-tourism
h. Cross interest support—This geography or a similar geography exists in all three proposals under RSG consideration, This MPA design resulted from extensive cross-interest negotiations. Its bounds reflect the careful consideration of many competing issues. These include, habitat protection (foremost), water quality, in the way of the Aliso diffuser location, public access for all users, commercial harvest of lobsters that supplies local markets and restaurants, recreational fishing interests of many types and access for those who would visit this MPA because of the protections for critters it affords.

4. Compliance with SAT Guidelines

a. Meets SAT size guidelines
b. Expressly or functionally meets SAT guidelines to capture replicates for the following key habitats:

• met	Soft 100 - 200m
• met	Soft 200 - 3000m
• met	Surfgrass
• met (at 96% level)	Soft 30 - 100m
• met	Soft All Depths
• met (data gap)	Hard 30m Proxy
• met	Soft 30m Proxy
• met	Rocky Shores
• met	Beaches

5. Design Considerations

a. This Laguna SMR is part of the backbone of MPA's designed to meet the SAT dictates for spacing guidelines and most of the habitat replication guidelines. However, due to the non-existence of certain habitats within the subregion, some habitat guidelines are not met (specifics are delineated in "Other Considerations").

b. Intent is to support the permitting of all activities required under other regulatory authority that will or may result in a "take" of protected resources, expressly including those required for the continued maintenance and upgrade of existing facilities related to the Aliso waste water management facility.

c. The design of this MPA represents a large compromise among fishing interests in the area and cannot be moved or expanded without major economic impacts to the adjacent harbors and local sport and commercial interests. Lobster fishermen are heavily impacted in this area by closing Pinnacles and Arches. In addition this MPA keeps areas of high recreational impact such as Salt Creek and Woods Cove open for local fishermen. However local access for shore based activities like beach fishing and spearfishing will be impacted.

d. The Laguna area has high utilization by both the recreational and commercial sectors. Newport harbor is the home of (2) Sportfishing operations and Dana harbor is home to (1), which, in numbers of fishing passengers served, equals the volume of the (2) located in Newport harbor. Both harbors boast thousands of resident private boats/consumptive users, of which the highest percentage frequent the Laguna area as opposed to the areas west (north) of Newport harbor and/or east (south) of Dana harbor. The Newport Beach/Laguna Beach/Dana Point area provides access points for kayak, spear and shore fishermen. Both harbors are bases for commercial fishing to include lobster, crab, urchin, and some finfish trapping in addition to live bait operations. At times the coast of Laguna Beach is a prime, thriving area for the harvesting of market squid by commercial seiners.

e. Last, the historic Newport harbor dory fleet fishes this area for its product (cod, sculpin, etc.) which is sold to tens of thousands of southern California

residents and visitors to the local area annually and has been for the past 80 years.

f. This MPA retains easy coastal access points south of Cress street open for all users while allowing those desiring non-consumptive use easy access above Cress Street; thus sharing available easy access between the multiple uses.

6. Habitat Replication notes

a. This area shows no kelp habitat; however do to two restoration projects by OC CoastKeeper (Nancy L Caruso)and by MBC (Mike Curtis) these two projects have restored kelp in the area. One of the projects restored kelp by relocating sea urchins (not allowed to be taken currently). These historic kelp beds were destroyed by El Nino, poor water quality and urchin grazing. Continuous monitoring of the beds will continue into the future. The linear miles covered by these restoration projects (currently exceeding the maximum kelp guideline) exceed the replication requirements. In addition, local knowledge of this area believes that the shallow rock proxy may be underestimated in this area.

b. An independent scientific hydroacoustic survey was conducted to quantify kelp and hard bottom habitat in the near shore area of the proposed Laguna MPA. The results of the analysis showed an estimated 1.33 statute miles of kelp and 2.12 statute miles of hard bottom along the survey transects. This data was collected by Bio Sonics and submitted for consideration by the Science Advisory Team. This information confirms local knowledge of this area.

c. This MPA misses soft 30-100 m habitat replication and spacing guidelines by an insignificant 0.1 statute square miles. The authors of this MPA request that the SAT evaluation acknowledge this small gap and count this habitat in evaluations.

d. This MPA captures all key habitats except Soft 30-100 M (missed by 0.1), Hard 30-100 M, Hard 100-3000 M, Persistent Kelp, and Hard 30 M Proxy (Data gap).

Laguna South SMCA

1. Introduction

2. This is strictly a goal 3 MPA emphasizing inter-tidal/tide pool protection with monitoring and enforcement provided by local agencies and government officials. Please see www.ocmarineprotection.org for information about the goals of Orange County inter-tidal protection areas. Intent is to have an SMCA that extends 1000 feet offshore and protects intertidal species. Take of species generally not associated with tide pool areas is to be permitted while providing tide pool specie protection.

3. Essential Facts: Laguna South SMCA

a. Type of MPA: State Marine Conservation Area
b. Boundaries: (per DFG feasibility guidelines):
   - Originating from the point along the Dana Point Harbor Breakwater where it first bends at approximately 33º 27.5' N and 117º 42.3' W
   - Thence directly offshore 1,000 feet
   - Thence upcoast along the 1,000 foot from MHT contour, generally trending Northwest ward to where this contour intersects with the Laguna SMR
   - Thence shoreward along that boundary to its landfall at MHT.
   - The area of interest for protection encompasses only the nearshore intertidal. This boundary is excessive for providing the intended protection from shore based "shore picking." Thus the desired protections are amply provided for within the above described boundary.

c. Miles of Coverage:
   - 6.9 miles of shoreline.
   - 1.43 square miles

d. Generally allowed takes

• Sea cucumber	Diving	commercial
• Lobster	Trap	commercial
• Lobster	Hoop net	recreational
• Lobster	Diving	recreational
• Urchin	Diving	commercial
• Rock crab	Trap	commercial
• Rock crab	Hoop net	recreational
• Finfish	Hook and line	recreational
• Finfish	Hook and line	commercial
• Finfish	Spearfishing	recreational

e. Habitats/Features (no replication or network function value applicable for these):

- Surfgrass 4.40 miles
- Hard 30m Proxy 0.19 miles
- Soft 30m Proxy 3.71 miles
- Beaches 4.72 miles
- Hardened Shores 0.32 miles
- Rocky Shores 3.42 miles
- Kelp Maximum 0.43 miles
- Unknown 0 - 30m 0.75 sq miles
- Soft All Depths 0.53 sq miles

4. Site Rationale

a. Meets the following MLPA goals and objectives
   - Protects the natural diversity and abundance of marine life,
   - Helps sustain, conserve, and protect marine life populations,
   - Improves recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance
   - Protects marine natural heritage.
   - Helps ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.
   - Achieves balance between conservation and limiting socio-economic impacts

b. Good area for eco-tourism

c. *Cross interest support*—This geography or a similar geography exists in all three proposals under RSG consideration, This MPA design resulted from extensive cross-interest negotiations.

5. Compliance with SAT Guidelines

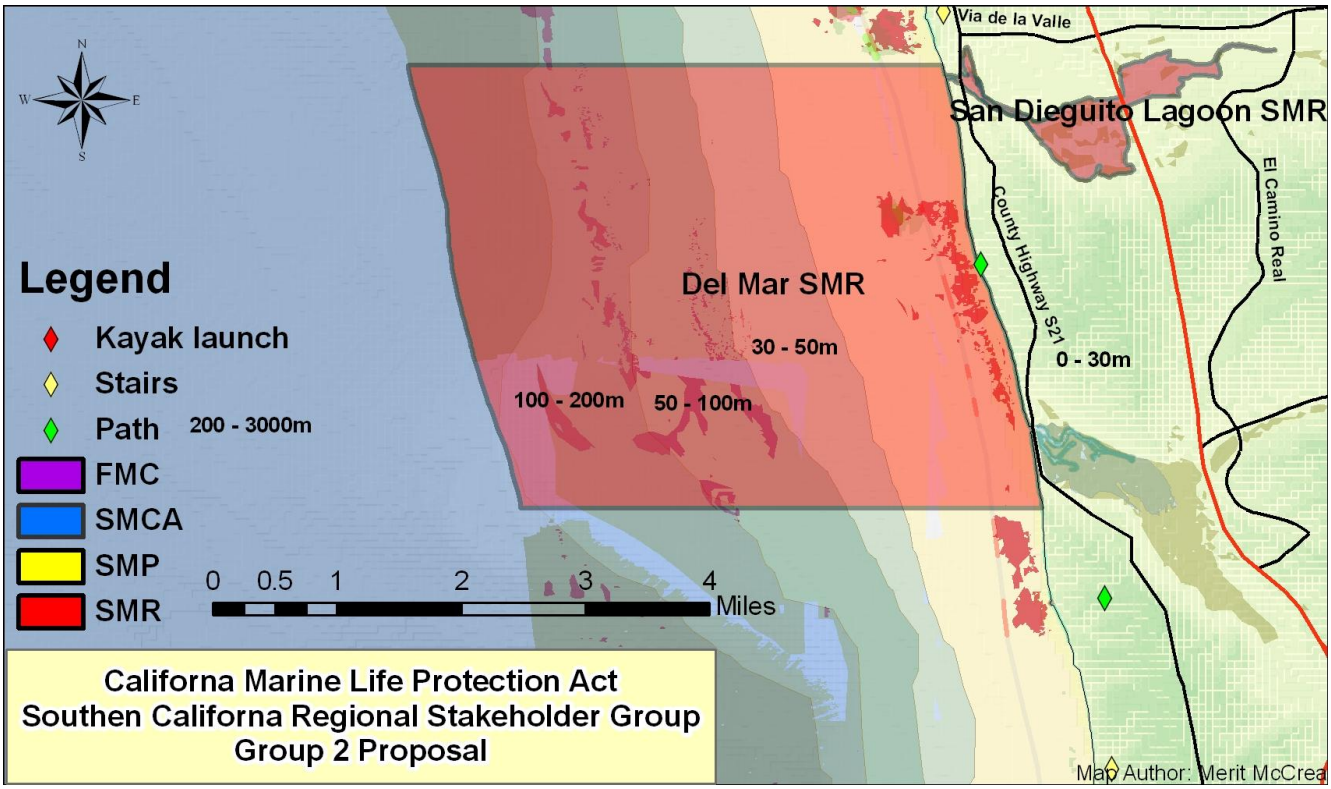
a. SAT guidelines are not applicable to the primary purpose of this MPA

6. Other: This is a heritage MPA. It is established for the maintenance of public access to view and experience a high abundance of indigenous marine organisms within an easily accessible area. Recommendation that it must have a sponsor agency or group that provides the following:

a. 1) Seaward boundary markers (buoys) at no less than three to a mile.

b. 2) On shore markers at the shore-side boundaries and coastal access points with the prohibited takes that would otherwise be allowed, listed.

c. 3) Some measure of local enforcement, minimally a docent program of public outreach volunteers that provide information to the public and can report infractions to local law enforcement. This program should put at least one person in the area during most daylight hours. This area has a sponsor group that does this already. It is intended that a filled, dedicated full-time non-DFG local peace officer position will satisfy this requirement.
d. This is a Goal 3 motivated heritage MPA that doesn't otherwise meet the feasibility guidelines well.



Del Mar State Marine Reserve (SMR)

1. Introduction:

This valuable SMR provides an oceanic link between two important estuaries, San Dieguito lagoon and Los Penasquitos, and is designed to protect key unique habitats including deepwater rock structures, pinnacles, and underwater headland. Located within only 12 miles of the Sunset Cliffs SMR, the Del Mar SMR supports habitats not located in the southern Sunset Cliffs SMR, and provides larval connectivity between the two SMRs. Adjacent to the submerged La Jolla deepwater canyon, the Del Mar SMR contains nutrient rich, upwelling waters critical to the marine ecosystem.

Beach replenishment and dredging, and lagoon restoration are important activities that should be allowed to continue. It is our intent to ensure that the City of Del Mar is able to continue beach replenishment and dredging activities in the same locations and periodicity that they have been for years.

2. Essential Facts: Del Mar State Marine Reserve (SMR)

a. Type of MPA: State Marine Reserve
b. Level of Protection: Very High
c. Boundaries: (per DFG feasibility guidelines)
   - Western: State waters boundary
   - Eastern: Mean high tide line
   - Northern: 32° 58.6’ N (San Dieguito Lagoon mouth)

- Southern: 32° 55.5’ N

d. Miles of Coverage:
e. 3.6 miles of shoreline
f. 12.8 square miles
g. Habitats/Features:
    - Depth range: 0 – 330 m
    - Southern end of hard bottom 30-100m and 100-3000m
    - Shallow water habitat (<30 m)
    - Mid-depth habitat (30-100 m)
    - Deep water habitat (>100m)
    - Hard bottom
        1. <30m
        2. 30-100m
        3. 100-3000m
    - Soft bottom
        1. 30-100m
        2. 100-200m
        3. 200-300m
    - Surfgrass
    - Beaches
    - Deep water pinnacles
    - Key habitat values:

habitat_name	value	units
Surfgrass	1.16	miles
Hard 30m Proxy	0.75	miles
Soft 30m Proxy	2.89	miles
Beaches	3.43	miles
Hardened Shores	0.00	miles
Rocky Shores	0.18	miles
Kelp Persistence	0.00	miles
Kelp Maximum	0.19	miles
Soft 100 - 200m	2.22	sq miles
Unknown 0 - 30m	0.13	sq miles
Soft 200 - 3000m	1.51	sq miles
Unknown > 30m	0.72	sq miles
Soft 30 - 100m	3.93	sq miles
Soft All Depths	11.29	sq miles
Hard 30 - 100m	0.19+	sq miles (data gap exists)
Hard 100 - 3000m	0.22	sq miles

3. Site Rationale

a. Backbone SMR Site
b. Area abuts two important estuaries and ties together many habitats from shallow to deep.

c. Compared to other regions in study area, this is one of the only areas that incorporate the true oceanic 100 fathom curve with rock structures and pinnacles open to water flow from the open ocean.
d. The SAT indicated that hard 30-100m substrate is rare within the south coast study region and difficult to capture within MPA proposals. Del Mar SMR is one location where this 30-100m habitat can be captured. Work Group 2 has attempted to include 30-100m habitat within the Del Mar SMR but falls short of meeting replication threshold guidelines by 0.01 square miles. Upon review of the substrate data in this location, it appears that hard 30-100m substrate is likely present in an area of unmapped habitat.
e. It is an underwater headland, allowing large pelagic species, including swordfish, striped marlin, thresher sharks, white sharks, mako sharks, easy access to inshore feeding and spawning grounds. This is also true for benthic fauna.
f. The Del Mar SMR falls slightly short of having enough 0-30m rock proxy to have a replicate. However, for all intended purposes this requirement is functionally met, as indicated by looking at the "predicted substrate" data layer within Marinemap, as there is a data gap in an area of predominant rocky bottom.
g. The area provides Rockfish (Sebastes) spawning grounds, adult resting and feeding areas as well as larval settling area and juvenile feeding grounds. This MPA is complimentary to the Sunset Cliffs SMR/SMCA and captures habitats not included there including, deep >100 meter rock.
h. Incorporates very large grunion spawning ground
i. High value seabird foraging area
j. Marine mammal foraging area (sea lions, coastal bottlenose dolphins, harbor seals)
k. Squid spawning area
l. Adjacent to submerged deepwater canyon
m. Submerged archaeological sites
n. Offshore connectivity to the San Dieguito lagoon

4. Compliance with SAT Guidelines

a. Meets SAT size guidelines
b. Meets SAT guidelines for habitat replication
    - Soft 30m proxy
    - Soft 30 – 100m
    - Soft 100 – 200m
    - Soft 200 - 3000m
    - Hard 30m proxy
    - Hard 30 – 100m (given credit for habitat within a known data gap)
    - Hard 100 – 3000m
    - Surfgrass
    - Beaches!

5. Goals/Objectives Achieved

This proposed SMR is founded on the principals described in the Marine Life Protection Act of 1999. Specific goals and objectives supported in this SMR:

Goal 1. To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.

Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.

Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.

Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value.

Goal 5. To ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.

Goal 6. To ensure that the state's MPAs are designed and managed, to the extent possible, as a network.

Goal 1, 2, 3 and 6 are uniquely supported with a SMR off Del Mar extending from 3nm offshore to the inland waters of the Del Mar lagoon. Protecting the natural diversity and abundance of marine life and ecosystems (objective 1)
The Del Mar SMR creates recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and will manage the waters in a manner consistent with protecting and sustaining biodiversity (objective 2 and 3). The Del Mar SMR overlaps the coastal lagoon, which connects to the San Dieguito River Park and Coast-to-Crest Trail. Starting from the ocean between Del Mar and Solana Beach, the trail stretches 55 miles to Volcan Mountain near Julian.

In consideration to goal 6, which outlines a requirement to ensure that the state's MPAs are designed and managed as a network, the Del Mar is only 12 miles from the Sunset Cliffs SMR/Ocean Beach pier SMCA cluster. In addition, and quite significantly, the Del Mar SMR occurs adjacent to and within the boundaries of the City’s Multiple Species Conservation Program (MSCP). The MSCP is a comprehensive, long-term habitat conservation planning program that covers approximately 900 square miles (582,243 acres) in southwestern San Diego County pursuant to the federal and California

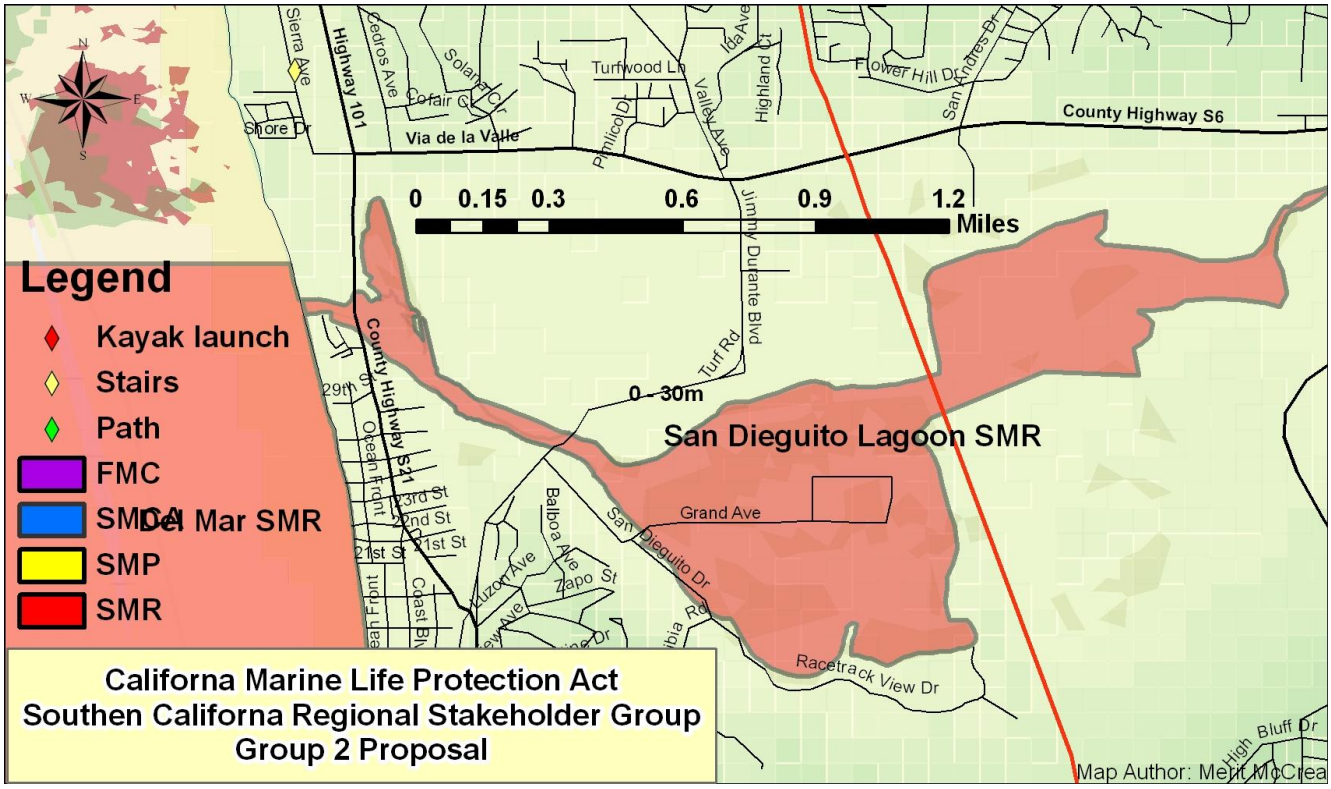
Endangered Species Acts and the California Natural Community Conservation Planning Act. It has been developed cooperatively by participating jurisdictions/special districts in partnership with federal/state wildlife agencies, property owners, and representatives of the development industry and environmental groups. As with the MSCP, the SMR is designed on an ecosystem level, preserving habitat for multiple species rather than focusing efforts on one species at a time. Linking these two ecosystems in an integrated network of marine and terrestrial habitats and populations is an enormous contribution to the ongoing clearly-articulated and managed local, regional and State conservation efforts (objective 5).

In consideration of goal 4 calling for the protection of unique marine life habitats in California waters for their intrinsic value, the Del Mar SMR is one of the only areas in the study region that incorporates the true oceanic 100 fathom curve with rock structures, pinnacles, and underwater headlands open to water flow from the open ocean. This unique and rich habitat adjacent to the La Jolla submarine canyon supports pelagic species, including swordfish, striped marlin, thresher sharks, white sharks, and mako sharks.

As indicated in Section 3, Site rationale, Work Group 2 contends that the missing 0.01 square miles of 30-100m hard substrate is likely present in an area of unmapped habitat within the Del Mar SMR. Work Group 2 has asked that staff raise this issue with the SAT evaluation habitat evaluation team, requesting credit for the rare habitat.

6. Other Regulated Activities

Offshore beach replenishment/nourishment activities such as dredging and sand placement are very critical in this area and should be allowed to continue with appropriate permitting. Restoration projects such as the North park restoration project should be allowed to continue with appropriate permitting. Beach grooming should be allowed to continue.



San Dieguito Lagoon State Marine Reserve

1. Introduction

San Dieguito Lagoon, a San Diego County estuary, is located in the northwestern most portions of the cities of San Diego and Del Mar and provides breeding, foraging and resting areas for aquatic and terrestrial animals. The lagoon is a recently restored mitigated wetland protection site with monitoring and local enforcement provided for by Sothern California Edison as mitigation for the San Onofre Nuclear power plant. Local volunteer programs assist with management and oversight. The restoration project includes the reintroduction of estuarine and coastal marsh native plant species, bird resting and nesting areas and public trails with interpretive viewing stations. Allowed uses in this very high protection SMR would be the continued restoration, renovation and research activities as allowed by law and appropriate permits. Dredging is required to keep the lagoon open to the ocean and is required as part of the restoration project and should be allowed to continue.

2. Essential facts: San Dieguito Lagoon

a. Type of MPA: State Marine Reserve
b. Level of protection: Very high
c. Boundaries: All waters below the mean high tide line extending east from the San Dieguito River mouth to the Camino Real Bridge.
d. Coverage: Approximately .52 square miles
e. Habitats: Estuarine coastal marsh, beaches and hardened shores.
f. Mitigation funding currently pays for rangers to patrol the lagoon area.

3. Site rational:

a. Rare estuarine habitat that provides protection for juvenile and adult marine and land animals. Ongoing research and monitoring programs provide education and protection for salt, fresh and brackish water habitats.
b. Linked to Del Mar State Marine Reserve at the San Dieguito River mouth.
c. Part of the Multiple Species Conservation Program – a comprehensive, long-term habitat conservation planning program for San Diego County.

4. Compliance with SAT Guidelines

a. Meets SAT size guidelines for estuaries.

5. Goals/Objectives achieved:

Goal 1.

To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.

Objective 4 – Protect biodiversity, natural trophic structure and food webs in representative habitats.

Goal 2.

To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.

Objective 1 – Help protect or rebuild populations of rare, threatened, endangered, depressed, depleted, or overfished species, and the habitats and ecosystem functions upon which they rely.

Objective 3 – Sustain or increase reproduction by species likely to benefit from MPAs with emphasis on those species identified as more likely to benefit from MPAs through protection of breeding, spawning, foraging, rearing or nursery areas or other areas where species congregate.

Goal 3.

To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbances, and to manage these uses in a manner consistent with protecting biodiversity.

Objective 2 – Provide opportunities for scientifically valid studies, including studies on MPA effectiveness and other research that benefits from areas with minimal or restricted human disturbance.

Objective 3 – Provide opportunities for collaborative scientific monitoring and research projects that evaluate MPAs that promote adaptive management and link with fisheries management, seabird and mammals information needs, classroom science curricula, cooperative fisheries research and volunteer efforts, and identifies participants.

Goal 4.

To protect marine natural heritage, including protection of representative and unique marine life habitats in south coast California waters, for their intrinsic value.

Objective 1 – Include within MPAs key and unique habitats identified by the MLPA Science Advisory Team for this study region.

Objective 2 – Include and replicate to the extent possible [practicable], representatives of all marine habitats identified in the MLPA or the California Marine Life Protection Act Master Plan for Marine Protected Areas across a range of depths.

Goal 5.

To ensure that south coast California MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.

Objective 2 – Provide opportunities for interested parties to help develop objectives, a long-term monitoring plan that includes standardized biological and socioeconomic monitoring protocols, a long-term education and outreach plan, and a strategy for MPA evaluation.

Objective 3 – Effectively use scientific guidelines in the California Marine Life Protection Act Master for Marine Protected Areas.

Objective 4 – Ensure public understanding of , compliance with, and stakeholder support for MPA boundaries and regulations.

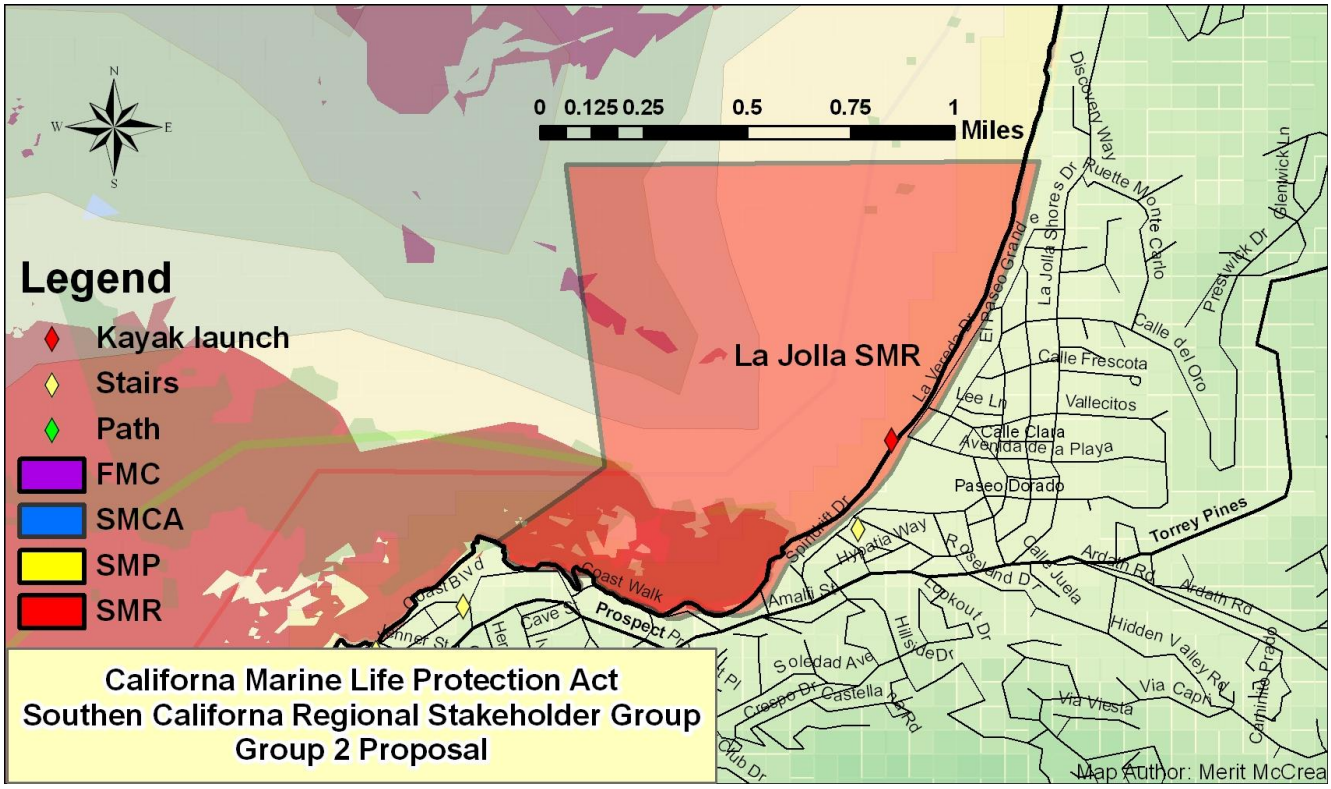
Objective 5 – Include simple, clear, and focused site-specific objectives/rationales for each MPA and ensure that site-level rationales for each MPA are linked to one or more regional objectives.

6. Other regulated activities:

Recreational boating, swimming, wading or diving would not be allowed unless these types of activities were allowed under research/restoration permits.

7. Conclusion:

San Dieguito Lagoon State Marine Reserve, a rare South Coast estuary, provides foraging, resting and breeding areas for marine and terrestrial animals. The lagoon is a link between the headwaters of the San Dieguito River (55 miles to the east in Julian) and the Pacific Ocean in the City of Del Mar. Ongoing research, monitoring and education opportunities are provided for by mitigation and bolstered by volunteer programs and local government associations.



La Jolla State Marine Reserve

1. Introduction

The La Jolla Cove State Marine Reserve (SMR) was designed to attribute a higher level of protection to a well-known, historic underwater ecological SMCA that has served as an icon of marine conservation in the community for decades. The SMR would include unique marine ecosystems, including La Jolla Canyon, areas of upwelling, kelp forests, State-listed species, rocky shores and sandy beaches. Protected animals include giant seabass and leopard shark congregations. Close proximity to UCSD and Scripps Institute of Oceanography provides for ongoing education and monitoring opportunities. Buoys marking boundaries of the SMR are maintained under a contract managed by the City of San Diego Lifeguard Department.

2. Essential Facts: La Jolla SMR

- Type of MPA: State Marine Reserve
- Level of Protection: Very High
- Reserve Boundaries:
  - Western: 32 degrees 51.07' N/117 degrees 16.40' W
  - Eastern: 32 degrees 51.86' N/117 degrees 15.28' W
  - Northern: 32 degrees 51.86' N/117 degrees 16.25' W
  - Southern: 32 degrees 51.22' N/117 degrees 16.17' W
- Habitats/Features:
  - Depth range: 0' – 214'
  - Size: 1.6mi coastline, 0.77 nm^2

- Shallow water habitat (<30 m)
- Mid-depth habitat (30-100 m)
- Hard bottom
    1. <30m
    2. 30-100m
- Soft bottom
    1. <30m
    2. 30-100m
    3. all depths
- Extensive kelp beds throughout the SMR - maximum
- Surfgrass
- Elk kelp
- Rocky shores (just under a linear mile)
- Species likely to benefit: Lobster, sheephead, shallow water rockfish
- Beaches
- Key habitat values:
    - Surfgrass 0.59 miles
    - Hard 30m Proxy 0.07 miles
    - Soft 30m Proxy 1.04 miles
    - Beaches 1.12 miles
    - Rocky Shores 0.91 miles
    - Kelp Maximum 0.39 miles
    - Unknown 0 - 30m 0.01 sq miles
    - Soft 30 - 100m 0.19 sq miles
    - Soft All Depths 0.65 sq miles
    - Hard 30 - 100m 0.01 sq miles

3. Site Rationale

Fed by nutrient-rich upwelling waters from the deep submarine La Jolla canyon, the La Jolla SMR would afford a very high level of protection to calico bass, sand bass, baracuda, bonita, yellowtail, shallow water rockfish, halibut, urchin, lobster, crab and coastal pelagic species such as squid, sardines, mackerel, anchovies, and occasionally highly migratory species of tuna.

Although this SMR does not meet minimum size guidelines, and therefore does not contribute to habitat replication, it does preserve - quite significantly and effectively - unique habitats and species while avoiding devastating socio-economic impacts. Preservation of this SMR in concert with the Del Mar/San Dieguito Lagoon to the north and Sunset Cliffs SMR to the south contributes to a unique network of protection to representative rocky shores, soft and hard bottom habitats, kelp forest, and deep submarine canyon.

By designating the historic SMCA as an SMR, the State of California will enhance the protection of this pristine marine ecosystem for local research opportunities from the Scripps Institution of Oceanography and NMFS Southwest Fisheries Science Center.

This SMR would protect a well-known, historic conservation area while minimizing severe, socio-economic impacts on thousands of marine stakeholders. Waters extending off the west and southwestern portions of the La Jolla peninsula are used extensively by commercial and recreational boaters, coastal pelagic finfish, lobster, groundfish and urchin fishermen, pelagic squid, sea kayaks, and divers. Containing readily assessable kayak boat launch sites, La Jolla offshore waters serve as one of the premier sites in the Southern California Bight for both consumptive and non-consumptive kayakers of all ages and experience.

This is a heritage MPA. It is established for the maintenance of public access to view and experience a high abundance of indigenous marine organisms within an easily accessible area. Recommendation that it must have a sponsor agency or group that provides the following:

1) Seaward boundary markers (buoys) at no less than three to a mile.
2) On shore markers at the shore-side boundaries and coastal access points with the prohibited takes that would otherwise be allowed, listed.
3) Some measure of local enforcement, minimally a docent program of public outreach volunteers that provide information to the public and can report infractions to local law enforcement. This program should put at least one person in the area during most daylight hours. This area has a sponsor group that does this already.
4) This is a Goal 3 motivated heritage MPA that doesn't otherwise meet the feasibility guidelines well.

This is currently the case for this existing MPA.

Currently buoys mark the current boundaries of the underwater reserve. Several sculptures, signs, plaques, and local published literature contain the boundaries of this reserve. However, concern has been raised by enforcement about the buoys marking the boundary. Historically, the buoys have been maintained by the City of San Diego Lifeguard Department. While the City of San Diego Parks department took over the maintenance of these buoys for a time, the responsibility now resides with the City of San Diego. The City hired a local consulting firm in Carlsbad to maintain the ecological preserve and swim buoys. Consequently, the ecological buoys, chains, shackles, and anchor weights have been replaced. Anchor weights have been increased to 500 pounds with a corner weight of 750 pounds (see attached report). A maintenance report is generated each year and was just finished in June for 2009

Divers crossing the mosaic depicting the MPA boundary.

4. Compliance with SAT Guidelines

Does not meet SAT size, spacing or habitat replication guidelines but does contribute to habitat representation guidelines.

5. Goals/Objectives Achieved

This proposed SMR is founded on the principals described in the Marine Life Protection Act of 1999. Specific goals and objectives supported in this SMR:

Goal 1. To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.
Objective 1
Objective 2
Objective 3
Objective 4
Objective 5

Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.
Objective 1
Objective 3

Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.
Objective 1
Objective 2
Objective 3

Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value.
Objective 1
Objective 2

Discussion

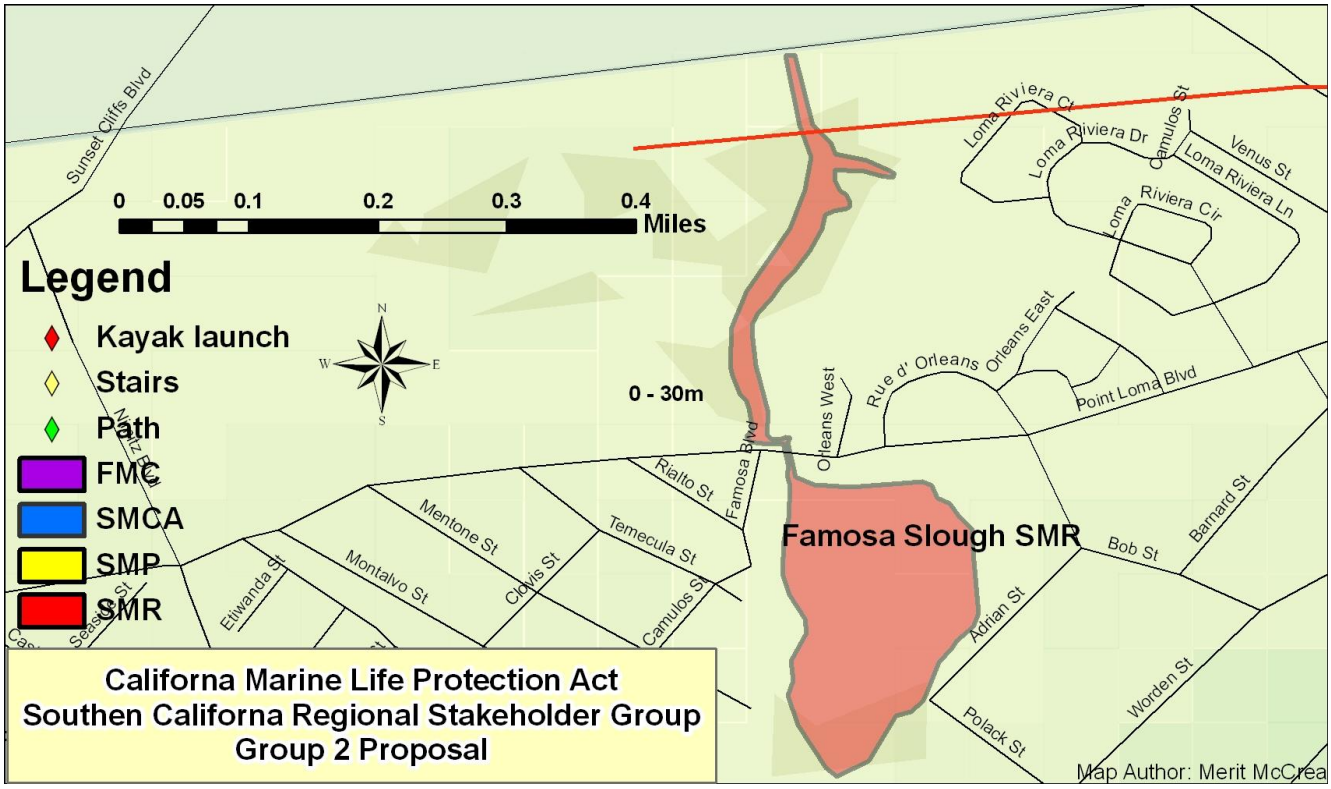
- Under goals 1 and 2, this SMR meets the habitat representation guidelines developed by the Science Advisory Team (SAT) while minimizing negative impacts to the enormous recreational and commercial fishing, kayaking and diving communities thriving in this area.

- Preserving the structure, function, and integrity of this rich M*acrocystis pyrifera* kelp bed, this SMR will protect marine ecosystems from the rocky shores to hard 30 – 100m and soft bottoms of all depths. Invertebrates, lobster, sheephead, white seabass, red urchins, crabs, sea cucumbers, and shallow water rockfish will all benefit from the protection offered by a SMR designation.

- In consideration of goals 3 and 4 to improve recreational, educational, and study opportunities, manage these uses in a manner consistent with protecting biodiversity (goal 3), and protect unique marine life habitats in California waters for their intrinsic value (objective 4), this SMR ensures that the rocky intertidal to both soft and hard bottom habitats, and delicate giant kelp ecosystem, are preserved for posterity. While this SMR contains one of the best sea kayak launching sites in Southern California. However, by retaining the configuration of the historic SMCA, the La Jolla SMR continues to afford sea kayakers and divers with a safe beach access located in relatively close proximity to rich offshore habitats. Within close proximity to research organizations, this SMR continues to afford scientific research opportunities literally in the backyard of Scripps Institution of Oceanography and NMFS Southwest Fisheries Science Center.

6. Other Regulated Activities

Boats may be launched and retrieved only in designated areas and may be anchored within the MPA only during daylight hours.



Famosa Slough State Marine Reserve (SMR)

1. **Introduction**
   The Famosa Slough State Marine Reserve (SMR) was designed to protect a 37-acre urban wetland in San Diego estuary habitat and provide for outstanding educational and recreational opportunities. It is a significant feeding and resting site for ducks and shorebirds including a myriad of heron and tern populations using the Pacific Flyway.

2. **Essential Facts: Famosa Slough SMR**

- Type of MPA: SMR
- Level of Protection: Very High
- Boundaries: (per DFG feasibility guidelines)
  - Western: 32° 45.063'N / 117° 13.749'W (Famosa Blvd)
  - Eastern: 32° 45.078'N / 117° 13.628'W
  - Northern: 32° 45.416'N / 117° 13.746'W (San Diego River Channel)
  - Southern: 32° 44.944'N / 117° 13.720'W
- Coverage:
  - 37 acres

- Habitats/Features:
  - Shallow water habitat (<30 m)
  - Soft, sandy bottom
  - Brackish

- Wetland
- Salt marsh

3. Site Rationale

Originally part of the Mission Bay wetland complex, the slough is flushed with salt water from the river channel, and collects rainwater and runoff from its 300-acre watershed. The 12-acre channel portion and the 25-acre southern portion of the slough are managed by the City's Park and Recreation Department. The southern portion was acquired by the city in September 1990. Both portions are accessible by the public, and benches are located at view areas.

Despite its small size and urban surroundings, the slough is a functioning wetland with freshwater, brackish and salt marsh habitats, teeming with small fish, crabs, and mollusks. Year-round bird life is rich and diverse. Popular with bird watchers, the slough supports an impressive array of avian species including, avocets (May 2, 2009 four American Avocets hatched on the Slough island, black-necked stilts, blue herons, blue-winged teals, Forster's terns, yellow-crowned night heron, Kingfisher, great egret, and ospreys.

The Friends of Famosa Slough is a nonprofit organization established to protect and restore the slough as a natural wetland preserve and to promote public awareness of wetlands. An important function of the Friends of Famosa Slough is to provide environmental education to students of all ages.

4. Goals Achieved

This proposed SMR is founded on the principals described in the Marine Life Protection Act of 1999. Specific goals and objectives supported in this SMR:

Goal 1. To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems. Famosa Slough SMR protects and maintains species diversity and abundance in areas of high native species and representative habitats (objective 1), and protects natural size, age structure, and genetic diversity of populations in representative habitats (objective 3). With the dramatic decline of wetlands along the California coastline, this SMR protects unique biodiversity, natural trophic structure and food webs in area exposed to the semi-diurnal tidal fluctuations characteristic of San Diego (objective 4). Once part of the Mission Bay complex, protecting this area with a SMR promotes recovery of natural communities from disturbances (objective 5).

Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild thosethat are depleted. This SMR promotes the protection and recovery of populations of rare avian species and the habitat upon which they rely (objective 1). Protecting this rich habitat increases the reproduction of species utilizing this slough as a breeding and spawning area (objective 3).

Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity. Famosa Slough SMR supports all objectives outlined in this Goal, including protecting an area in close proximity to Pt Loma and San Diego communities for the purpose of enhancing educational and scientific use.

Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value. With the exponential expansion of urban growth and development, Famosa Slough is one of the few coastal wetlands remaining along the California coastline, and therefore protects a key unique habitat in Southern California (objective 1)

Goal 5. To ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines. Management objectives of the Famosa Slough have consistently focused on providing opportunities for long-term monitoring, education and public outreach (objective 2). As a discreet inland waterway and estuary bounded on all sides by public landmarks, the Famosa SMR has clear, easily recognizable boundaries (objective 4). The purpose of this SMR is to continue protecting this area for the long-term refurbishment and conservation of a critical area used as a nursery for coastal marine fishes and as part of the Pacific flyway for migratory birds (objective 5).

5. **Other Regulated Activities**

The Slough has been the site of major restoration activity, including 2.2 acres of wetland along West Point Loma Boulevard. The terracing, removal of construction rubble and creation of berms was completed in December 2005. Future restoration activities should be allowed to continue with appropriate permitting.

Complete List of Birds Observed at Famosa Slough (ref: Friends of Famosa Slough)

(B) Species nests at the Slough
(R) Regularly seen in season
* Rare or unusual

Loons

- Common Loon *

Grebes

- Horned Grebe
- Eared Grebe
- Pied-billed Grebe (R)
- Western Grebe
- Clark's Grebe

Pelecaniformes

- A merican White Pelican
- Brown Pelican (R)
- Double-crested Cormorant (R)
- American Bittern *
- Least Bittern *

Wading Birds

- Great Blue Heron (R)
- Great Egret (R)
- Snowy Egret (R)
- Reddish Egret *
- Tricolored Heron *
- Little Blue Heron (R)
- Cattle Egret
- Green Heron
- Black-crowned Night Heron (R)
- Yellow-crowned Night Heron*
- White-faced Ibis *

Geese and Ducks

- Brant
- Mallard (B) (R)

- Gadwall
- Northern Pintail (R)
- American Wigeon (R)
- Eurasian Wigeon *
- Northern Shoveler (R)
- Cinnamon Teal
- Blue-winged Teal (R)
- Green-winged Teal
- Redhead *
- Tufted Duck *
- Ring-necked Duck
- Lesser Scaup (R)
- Surf Scoter *
- Common Goldeneye *
- Bufflehead
- Red-breasted Merganser
- Hooded Merganser *
- Ruddy Duck (R)

Raptors

- Northern Harrier
- White-tailed Kite
- Sharp-shinned Hawk
- Cooper's Hawk
- Red-shouldered Hawk
- Red-tailed Hawk (R)
- Osprey (R)
- Merlin *
- American Kestrel (R)
- Prairie Falcon *
- Peregrine Falcon *

Gruiformes

- American Coot (R)
- Clapper Rail
- Virginia Rail
- Sora

Shorebirds

- Black-bellied Plover
- Semipalmated Plover
- Snowy Plover *
- Killdeer (B) (R)
- American Avocet (B) (R)
- Black-necked Stilt (B) (R)
- Greater Yellowlegs (R)
- Lesser Yellowlegs *
- Solitary Sandpiper *
- Willet (R)
- Spotted Sandpiper
- Whimbrel
- Long-billed Curlew
- Marbled Godwit (R)
- Ruddy Turnstone
- Black Turnstone
- Red Knot
- Sanderling
- Dunlin
- Pectoral Sandpiper *

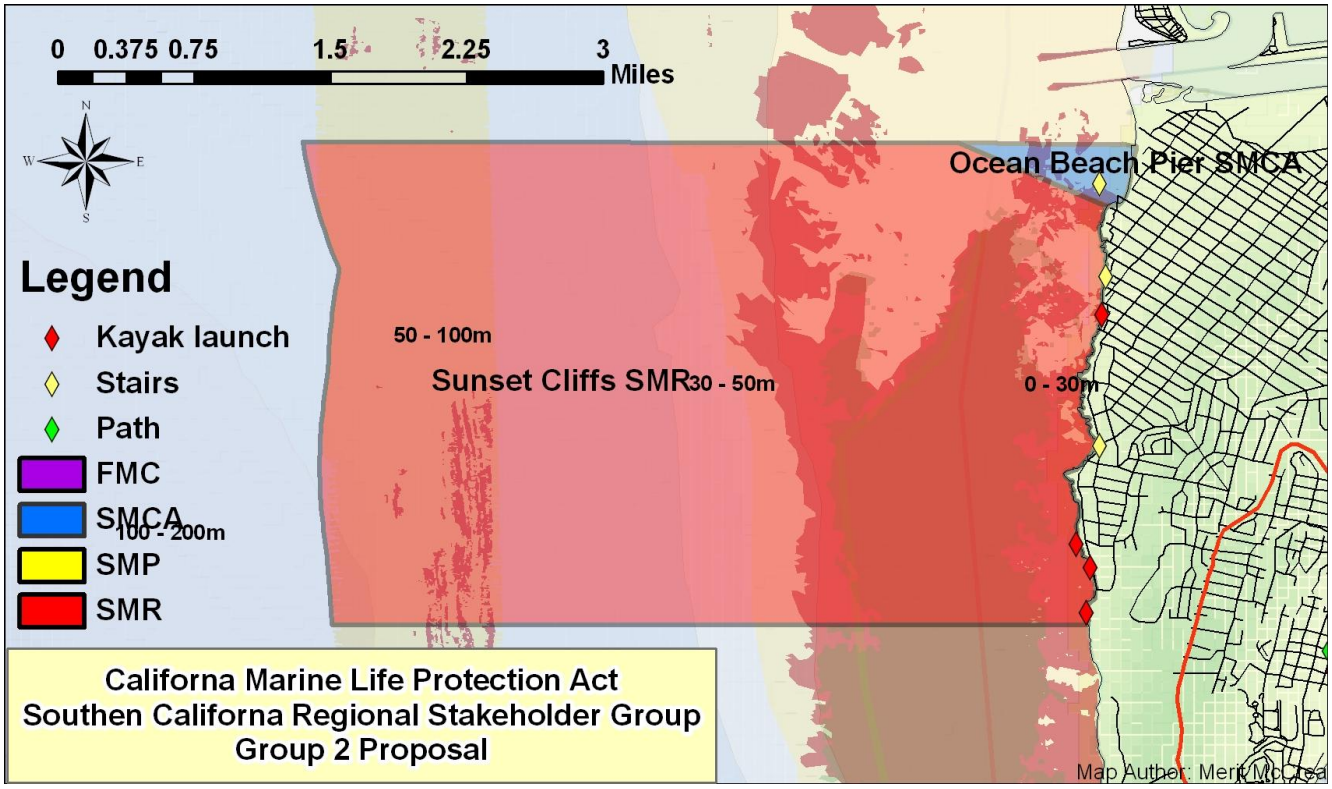
- Baird's Sandpiper *
- Western Sandpiper (R)
- Least Sandpiper (R)
- Stilt Sandpiper *
- Long-billed Dowitcher
- Short-billed Dowitcher (R)
- Wilson's Snipe *
- Wilson's Phalarope
- Red-necked Phalarope

Jaegers

- Parasitic Jaeger *

Gulls, Terns and Skimmers

- Bonaparte's Gull
- Mew Gull
- Ring-billed Gull (R)
- California Gull (R)
- Herring Gull
- Thayer's Gull *
- Glaucous-winged Gull
- Western Gull (R)
- Heermann's Gull
- Caspian Tern
- Royal Tern
- Elegant Tern
- Common Tern
- Forster's Tern (R)
- Least Tern (R)
- Black Tern *



Sunset Cliffs State Marine Reserve (SMR) / Ocean Beach Municipal Pier State Marine Conservation Area (SMCA) Cluster

1. **Introduction**

   This SMR/SMCA cluster located on the northern end of Point Loma was designed to meet SAT size and spacing and habitat replications guidelines by capturing unique substrate and floral habitats, including rocky intertidal, deep water, persistent kelp, elk kelp, and surfgrass. Overlapping the northern third of one of California's largest persistent kelp beds, this SMR/SMCA cluster will have a net positive affect from spill-over into the adjacent kelp bed. It is located in close proximity to Scripps Institution of Oceanography and NMFS Southwest Fisheries Science Center, and avoids conflicts with Mission Bay and San Diego Bay harbor entrances.

2. **Essential Facts: Sunset Cliffs SMR/SMCA**

- Type of MPA: State Marine Reserve / Conservation Area Cluster
- Level of Protection: Very High / Moderate High
- Reserve Boundaries: (per DFG feasibility guidelines)
  - Western: 3nm offshore (117° 17.000' W)
  - Eastern: Mean high tide line
  - Northern: 32°45.100' N / MHT (lines up w/small rock jetty)
  - Southern: 32°42.800' N / MHT (fence line along southern end of Sunset Cliffs Park)

- Conservation Area Boundaries: Within the boundaries of the SMR, there is a small, pie shape State Marine Conservation Area, which provides recreational fishing opportunities on the Ocean Beach Municipal Pier. Boundaries of this SMCA are:
    - Northern: 32°45.100N (lines up with small rock jetty on the shore)
    - Northwest Corner: 117° 16.000W
    - Southeast Corner: 32°44.800 N (lines up with the end of Narragansett Avenue)
    - The distance from the pier to the SMR is 300 feet or farther, negating the chance fishermen casting from the pier will be able to reach the SMR.
- Miles of Coverage:
    - 2.6 miles shoreline
    - Cluster – 9.689 sq m
        - SMR 9.29 sq miles
        - SMCA 0.399 sq miles
- Habitats/Features:
    - Depth range: 0 – 105 m
    - Shallow water habitat <30 m (mostly hard some soft)
    - Mid-depth habitat 30-100 m
    - Deep water habitat >100m
    - Hard bottom
        a. <30m
        b. 30-100m
    - Soft bottom
        a. <30m
        b. 30-100m
        c. 100-200m
    - Extensive persistent kelp beds throughout the SMR
    - Surfgrass
    - Elk kelp
    - Rocky intertidal
    - Species likely to benefit: Lobster, sheephead, shallow water rockfish,

3. Site Rationale

The Pt Loma kelp bed is one of the largest off the California coastline. Protection afforded marine resources in the SMR will benefit marine populations in the surrounding large kelp beds, provide a protective buffer between the activities in Mission Bay and San Diego Harbor, and afford research opportunities in close proximity to Scripps Institution of Oceanography.

- Backbone SMR
- Meets DFG feasibility criteria
- Meets all six goals of the MLPA
- Socioeconomic – achieves protection of important species and habitats while limiting socioeconomic impacts on recreational and commercial fishing by leaving La Jolla area available for their fishing opportunity.

- Southern boundary avoids conflict with Dept of Defense research and development activities. Extending south beyond southern boundary of Sunset Cliffs Park overlaps military operations occurring in Categories A, B, C, and D. The SAT assessed category A (mine neutralization) and B (Research & Development) activities as potentially incompatible with the goals of the MLPA.
- SMR overlaps high value seabird foraging area.
- High value marine mammal foraging area (sea lions, coastal bottlenose dolphins, harbor seals)
- Allows recreational fishing from the Ocean Beach Municipal pier by all allowable methods of recreational take. This pier is particularly important to the community of subsistence fishermen who regularly fish from this pier.
- Protects very unique habitats including, persistent kelp, rocky intertidal, deep water rocky habitat, and surfgrass
- SMR/SMCA does not overlap entrance to San Diego Harbor or Mission Bay.
- Creates unique research opportunity in close proximity to Scripps Institution of Oceanography and NMFS Southwest Fisheries Science Center
- Protects important grunion spawning ground
- The north and south boundaries are placed at easily recognized landmarks.

4. Compliance with SAT Guidelines

- Meets SAT size guidelines
- Meets SAT habitat replication guidance for:
    - Surfgrass
    - Soft 30 – 100m
    - Hard 30 - 100m
    - Hard 30m proxy
    - Kelp persistence
    - Rocky shores
- Meets SAT guidelines for Spacing
    - Exceeds spacing guidelines – Sunset Cliffs SMR is within 12 miles of the Del Mar SMR
- Although this design does not strictly meets DFG feasibility guidelines, we believe, given the historical use, interpretive infrastructure, local understanding and marking, that this is the design that would most easily generate compliance for this area.

5. Goals/Objectives Achieved

This proposed SMR/SMCA cluster is founded on the principals described in the Marine Life Protection Act of 1999. Specific goals and objectives supported in this SMR/SMCA cluster:

Goal 1. To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.

Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those

that are depleted.

Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.

Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value.

Goal 5. To ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.

Goal 6. To ensure that the state's MPAs are designed and managed, to the extent possible, as a network.

- Under goals 1, 2 and 6, this creative SMR/SMCA meets the design guidelines developed by the Science Advisory Team (SAT) while minimizing negative impacts to recreational, commercial and subsistence fishing communities. The Sunset Cliffs SMR and Ocean Beach Municipal Pier SMCA cluster forms the southernmost anchor to a comprehensive network of SMRs extending up the coastline to Pt Conception. This SMR/SMCA cluster will protect the natural biodiversity and rich abundance found in one of California's largest persistent kelp beds (objective 1).

- Preserving the structure, function, and integrity (objective 2) of this rich M*acrocystis pyrifera* kelp bed extending offshore to 3nm from the Ocean Beach Municipal pier in the north to the southern boundary of Sunset Cliffs Park to the south, this SMR/SMCA cluster will protect marine ecosystems from the rocky intertidal to deep water rocky habitat. Invertebrates, lobster, sheephead, white seabass, red urchins, crabs, sea cucumbers, and shallow water rockfish will all benefit from the protection offered by a SMR designation. Not least of which, this SMR/SMCA cluster affords a very high level of protection to the very marine ecosystem sustaining the fish, invertebrate, marine mammal and shorebirds living in this area – the persistent, extensive giant kelp bed.

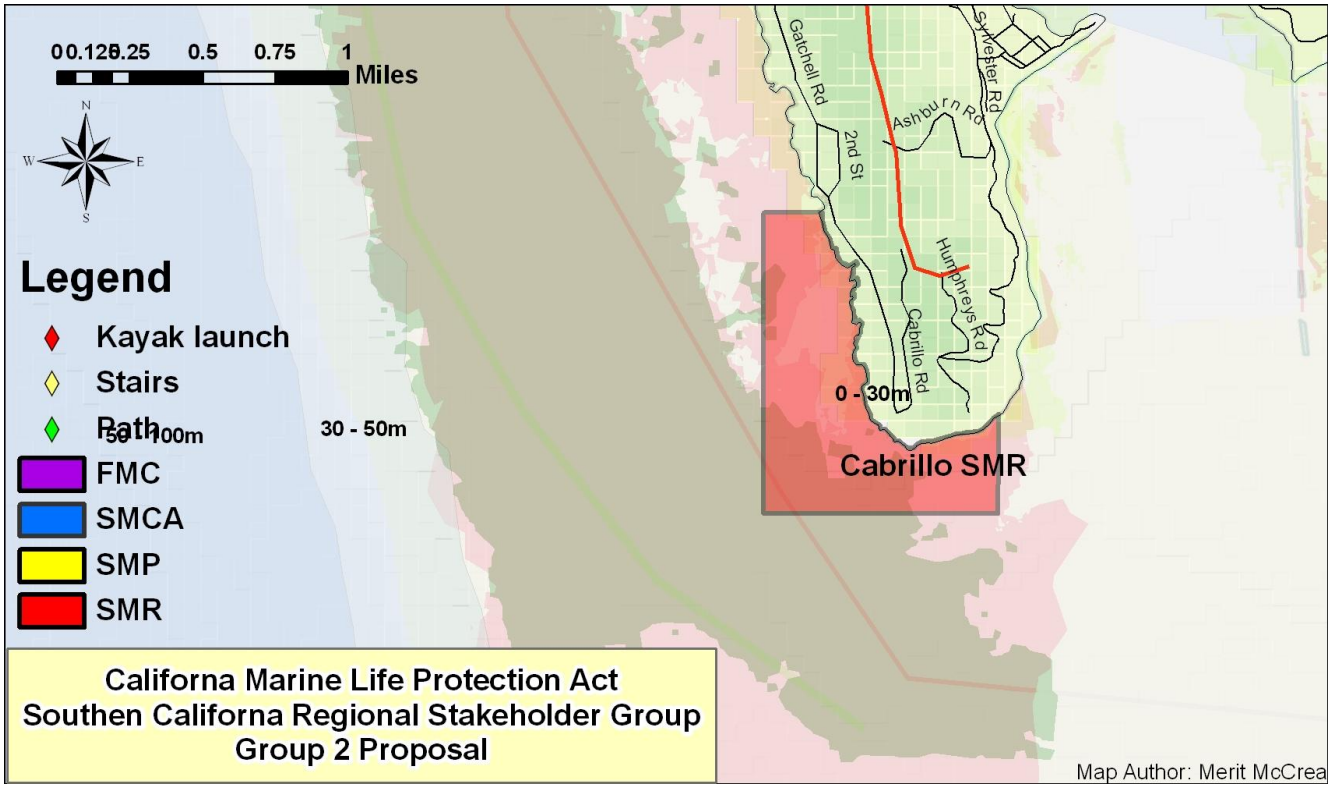
- Because the proposed SMR overlaps the northern one third of the Pt Loma kelp forest, restrictions on all extractions in the SMR will spill over to the surrounding kelp forest south along Pt Loma. This SMR will help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those
  that have been depleted (objective 6).

- In consideration of goals 3 and 4 to improve recreational, educational, and study opportunities, manage these uses in a manner consistent with protecting biodiversity (goal 3), and protect unique marine life habitats in California waters for their intrinsic value (objective 4), this SMR/SMCA cluster ensures that the rich intertidal to deep rocky habitats and delicate giant kelp ecosystem are preserved for posterity. Within close proximity to research organizations, this SMR/SMCA continues to afford scientific research opportunities literally in the backyard of Scripps Institution of Oceanography and NMFS Southwest Fisheries Science Center.

- In consideration of goal 5 requiring that California's MPAs have clearly defined objectives, effective management measures, adequate enforcement, and are based on sound scientific guidelines, this SMR/SMCA cluster a high level of protection to an extensive, persistent giant kelp bed while affording subsistence fishermen with the ability to retain access to the Ocean Beach pier for subsistence fishing. Boundaries for the SMR are clearly identified by well-known, visual landmarks, which facilitate effective management and enforcement of the SMR. SMCA overlapping the pier supports pier fishing only. Once again, this boundary is readily identified and managed since fishing in this area would only be conducted from the pier.

6. Other Regulated Activities

This SMR/SMCA overlaps CDFG Commission leaseable Kelp Administrative Bed number #3 (CCR, Title 14, §165.5(j)(1)(2)(3)). Kelp harvesting is allowed in the south coast area and is regulated by CDFG. Future kelp harvesting in this SMR/SMCA should be addressed in accordance with CDFG permitting guidelines.



CABRILLO STATE MARINE RESERVE

1. **Introduction**

This heritage marine protected area formally known as the Mia J. Tegner State Marine Conservation Area was initially created to protect the tide pools at Cabrillo National Monument. It is not intended to contribute to the network as a minimum sized MPA; however it has value for education, recreation, and research opportunities. In 1996 a report from Jack Engle and Gary Davis indicated 7 of the 13 species monitored since 1990 were in decline due to human trampling, poking, and removal. Cabrillo National Park management implemented the Tidepool Protection, Education, and Restoration Program (TPERP) to try to reverse the trend. The purpose of TPERP is to restore the inter-tidal area under its administration while permitting visitors to continue visiting it. TPERP consists of three parts, each of which is critical to its success—education and enforcement, restoration through area closure, and monitoring and research. Since the fall of 1996, the NPS has been recruiting and training a cadre of Volunteers-In-Parks (VIPs) and increased the number of park rangers in the inter-tidal area during low tides. The second part of TPERP is the closure of one-third of the tidepools to all visitors; this small no-use reserve, called “Zone 3”, is currently still closed. The purpose of this closure is to allow the area to recover from the pressures of high visitation (mostly trampling, rock overturning, and poking—restriction of collection and hunting has been very strict since at least 1990). Thirdly, as part of TPERP, the park made a long-term commitment to studying the tidepools. The monitoring program

became part of normal park operations (funding came from park base funds), and a commitment to continuing it in the long-term was made, as well as encouraging research activities to help inform management.

2. **Essential Facts: Cabrillo SMR**
    a. Type of MPA: State Marine Reserve (SMR).
    b. Allowed Take: No take is allowed.
    c. Boundaries: (Made to conform with DFG feasibility guidelines without interfering with near-shore boat-based fishing):

        Northern Boundary: Due west from an easily recognized point just north of the last public parking lot on the latitude line 32º s 40.6 Minutes North extending from the mainland to the longitude line of 117º 15 Minutes West.

        Western Boundary: Due South on the longitude line 117 º 15 Minutes West; first whole minute line offshore.

        Southern Boundary: Due East on the latitude line 32º 39.7 Minutes North extending from the Western boundary longitude line of 117º 15 Minutes West to the eastern boundary longitude line of 117º 14.3 Minutes West.

        Eastern Boundary: Due North on longitude line 117º 14.3 Minutes West from the southern boundary latitude line 32º 39.7 Minutes North extending to the mean high tide line onshore at that point, and then along the shoreline at mean high tide to the northern boundary.

    d. Miles of Coverage:

        Just over 1 ¼ miles of shoreline.
        0.38 square miles.

    e. Habitats/Features:

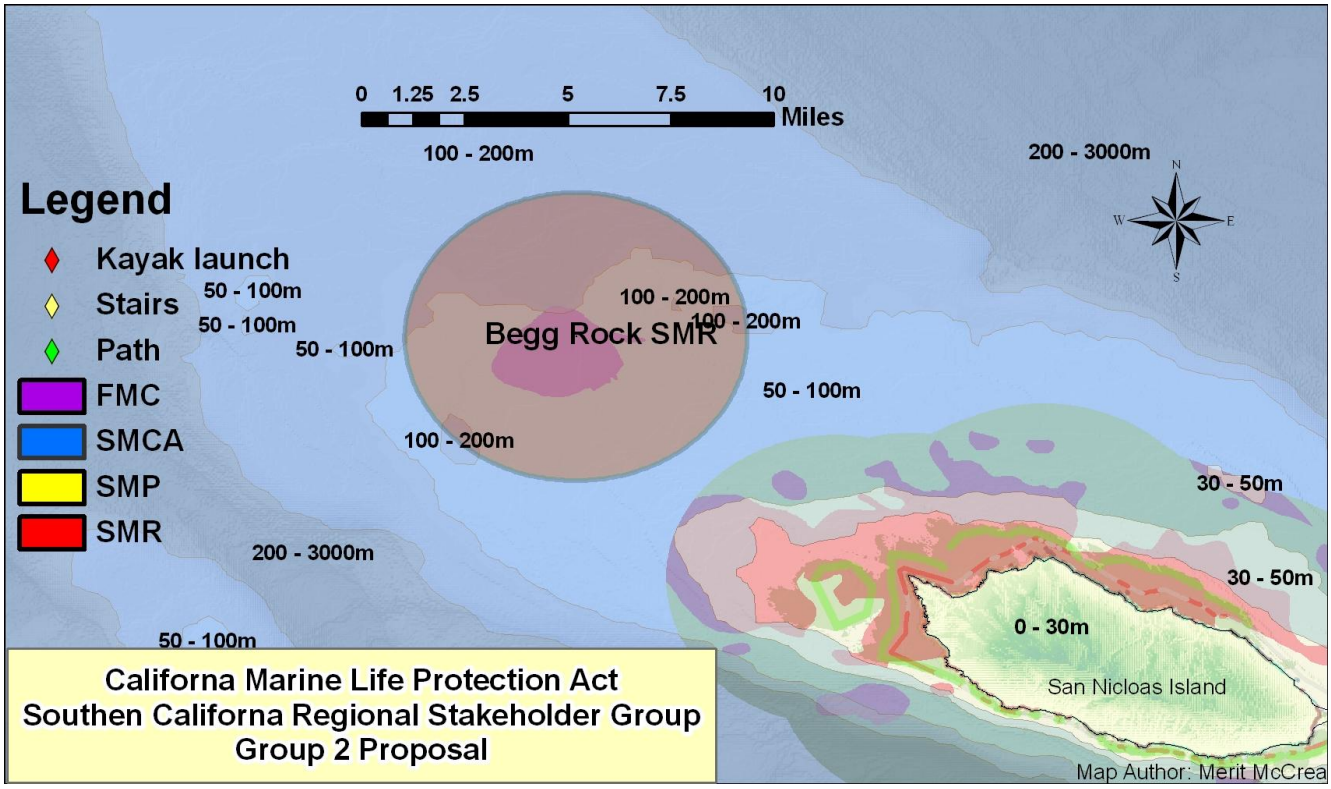
        Rocky inter-tidal habitat extending a considerable distance during low tide.
        Small sandy beach areas.
        Extensive surfgrass beds cover the entire area.
        Unique gravel trough area between shoreline and kelp beds.

Surfgrass	1.39	miles
Hard 30m Proxy	0.20	miles
Beaches	0.44	miles
Rocky Shores	0.97	miles
Unknown 0 - 30m	0.05	sq miles
Soft All Depths	0.03	sq miles

3. **Site Rationale**

    a. Heritage MPA site.
    b. 20 years of Monitoring by Cabrillo National Monument management.

c. Local rangers and trained docents educate and inform the public and visitors and enforce regulations in this area.
d. Human exclusion zone (Zone 3) is closed to human activity with signage and locally enforced to provide research and monitoring comparisons to the remaining areas. Zone 3 human exclusion is the area east of longitude 117 degrees 14.677 Minutes West along the shoreline marked by permanent signage.
e. Meets broad range of educational, recreational, and research goals and objectives.
f. Achieves balance between conservation and limiting socio-economic impacts by not extending further offshore where impact to local lobster, urchin, and other fisheries would occur.
g. This area receives over 100,000 visitors annually. These visitors annually pay for access to these protected areas.
h. Cross Interest Support—This small MPA has support from the local community, local fisheries, and the National Park Service.



Begg Rock SMR

1. Introduction

Incorporating the marine habitats of San Nicolas Island with many of the characteristics of a pinnacle/sea mount. This pristine reserve contributes to both the northern and southern island bioregions. The largest marine reserve proposed in southern California. The reserve is richly endowed with deep hard and soft bottom key habitats including submarine ridges. As such, the area is a major rockfish larval factory and home to rare "lumpy form purple hydrocoral."

2. Essential facts

a. Type of MPA: State marine reserve (SMR all take prohibited)
Note: this MSR is not intended to and will not regulate military activities. DFG and US Department of Defense should coordinate regulatory language similar to Vandenberg SMR.

b. Boundaries: (per DFG feasibility guidelines):

- A circle with a radius of 3 nautical miles from the mean high tide line of Begg rock. (all state waters surrounding Begg Rock)

c. Miles of coverage:

- 37. 96 square miles

3. Habitats/features

a. Key habitats:
   - Soft 100 - 200m 11.55 sq miles
   - Soft 30 - 100m 22.19 sq miles
   - Soft All Depths 33.74 sq miles
   - Hard 30 - 100m 4.10 sq miles
   - Hard 100 - 3000m 0.07 sq miles

b. Rocky ridges and escarpments

4. Site Rationale

a. Unique offshore pinnacle forms the core of this MPA Site
b. Plays important role in larval production and inter-island connectivity. This area is likely a key producer of rockfish larvae of the more than 50 species found locally. The pinnacle itself is likely a key recruitment site for larval reef fish of all local species.
c. High conservation value: protects rare pinnacle associated invertebrates, rock scallops and rockfish
d. Achieves balance between conservation and limiting socio economic impacts.
e. Due to its rich habitat and rare assemblage of biodiversity this area has an exceptional conservation function. Conversely, its distance from port and adverse weather conditions minimizes the socioeconomic impacts from removing this area from harvest.
f. Cross-interest support: This geography or a similar geography exists in all three proposals produced by the RSG indicating support from a broad range of regional stakeholder participants.

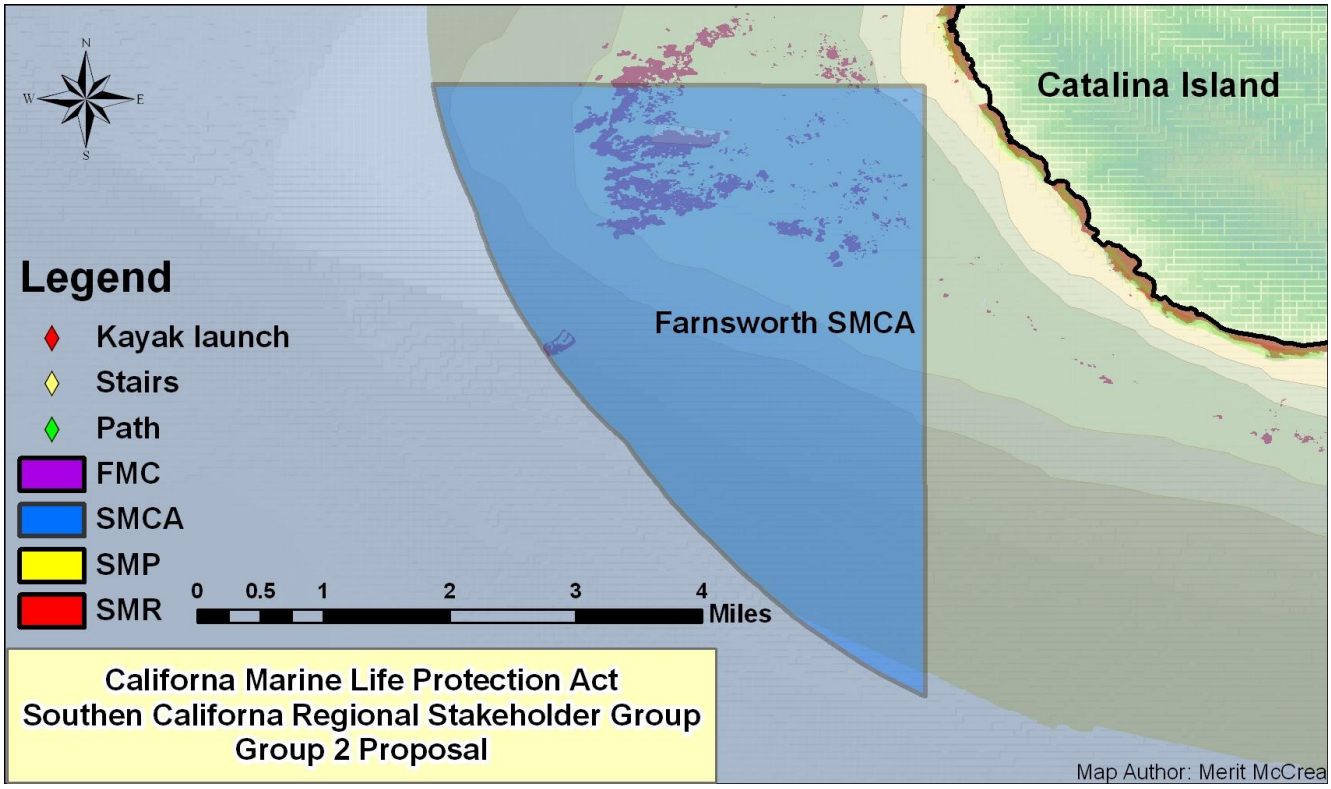
5. Compliance with SAT guidance

a. Meets/exceeds SAT size guidelines
b. Meets SAT guidelines to capture replicates:
   - Hard and soft bottom (all depths)
   - Soft bottom (30-100 m)
   - Hard bottom (30-100 m)
   - Soft bottom (100-200 m)
   - Rock pinnacle
c. Does not meet SAT guidelines for:
   - As a rare rocky pinnacle the MPA does not have enough shoreline to meet SAT guidelines related to beaches, rocky intertidal, and rocky shallow reef.

- Due to the extreme weather of the area, no kelp of surf grass is persistent
- As in 99% of the south coast study region, insufficient depth in state waters precludes the inclusion of sufficient soft bottom 200-3000 m or hard bottom 100-3000 m to capture these key habitats.

6. Other design considerations:

a. This SMR is not intended to and will not regulate military activities. DFG and US Department of Defense should coordinate regulatory language similar to Vandenberg SMR



Farnsworth State Marine Conservation Area (SMCA)
San Clemente Island Federal Military Closures (no state designation)

1. **Introduction**
   The Farnsworth SMCA captures unique rocky pinnacle habitat over Farnsworth Bank, while fulfilling all six goals of the Marine Life Protection Act of 1999 and minimizing widespread socioeconomic impacts. The area encompasses a high diversity of habitats and communities representative of the productive, wave-exposed portion of the East-Islands bioregion. Besides shallow and deepwater pinnacles, there are diverse shallow and deepwater reefs and sand plains replete with persistent key habitat including purple hydrocoral. Species likely to benefit include, rockfishes, scorpionfish, giant sea bass, sheephead, angel shark, lobster, sea cucumber, and rock scallops.

2. **Essential Facts: Farnsworth SMCA**
   a. Type of MPA: State Marine Conservation Area
   b. Level of Protection: High
   c. Boundaries:
      - North Boundary Latitude line 33.21 Minutes North
      - East Boundary Longitude line 118.29.5 Minutes West
      - South Boundary State waters between Noirth and East Boundaries
      - Note: this MPA does not intersect the shore it has a north east corner where the North and East boundaries intersect 21.00, 118 29.5, south
   d. Miles of Coverage:

- 10.18 sq miles

e. Habitats/Features:
   - Depth range: 50 – 1010 m
   - Key habitats
     1. Soft 100 - 200m 1.79 sq miles
     2. Soft 200 - 3000m 4.46 sq miles
     3. Soft 30 - 100m 3.27 sq miles
     4. Soft All Depths 9.52 sq miles
     5. Hard 30 - 100m 0.51 sq miles
     6. Hard 100 - 3000m 0.03 sq miles

f. Generally allowed takes:
   - Only those that will allow for a high level of protection for the species likely to benefit from spatially based protections at this scale (defined by the Science Advisory Team).

2. Site Rationale

The Farnsworth SMCA provides for a significant series of rocky pinnacles that rise abruptly from water depths of over 300 feet to 54 feet, where large schools of resident and pelagic bait fish gather. Toward shore, the pinnacles tumble down to mixed sand and deep rock habitats to slope gradually upward again to productive hard bottom substrate.

The Farnsworth SMCA:

a. Builds on the current Farnsworth reserve
b. Provides high conservation value; protects broad range of marine resources
c. Meets broad range of MLPA goals and objectives
d. Achieves balance between preservation and limiting socio-economic impacts.

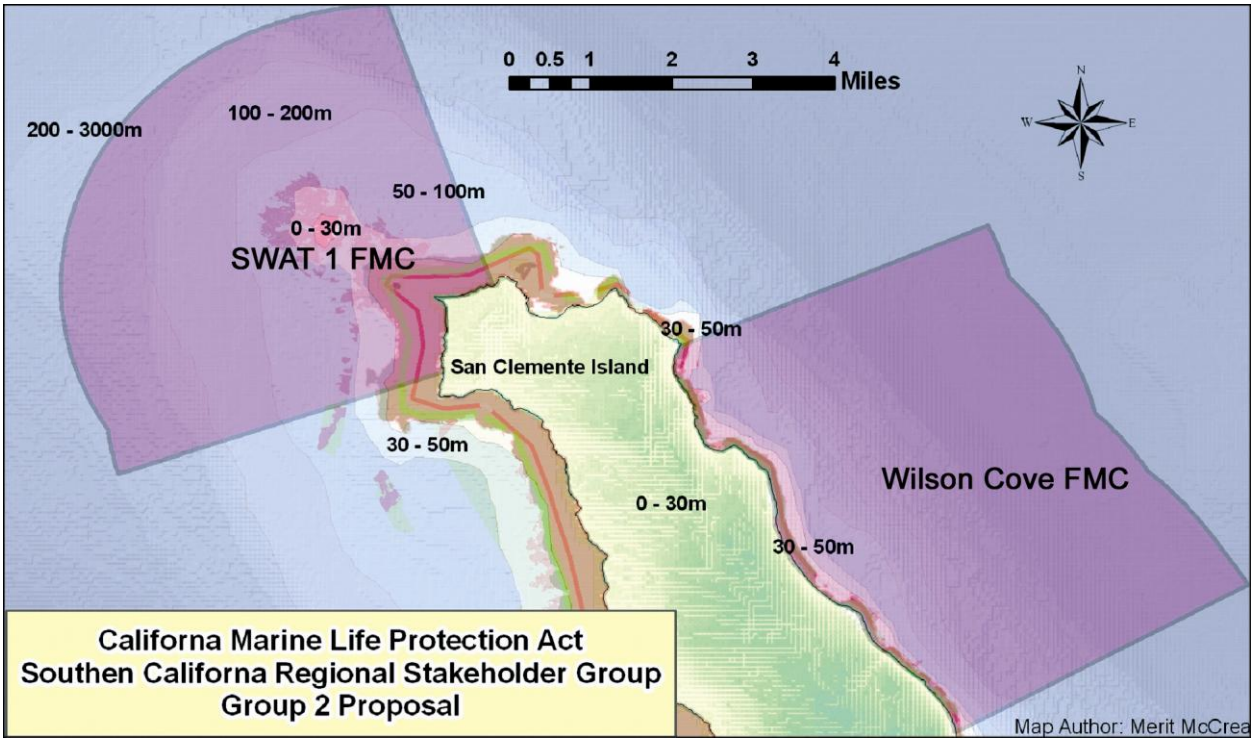
Compliance with SAT Guidelines:

a. Bioeconomic models will reveal a high score for habitat and biomass generation
b. Meets SAT habitat replication guidelines for: Soft 30 - 100m, Soft 100 – 200m, Soft 200 - 3000m, Rock 30-100m
c. Captures unique pinnacles
d. Situation outside the 50 meter depth, the bulk of this MPA is in deep water; whereby, allowing for a wide variety of surface-related consumptive activities while still providing a high level of protection.

At Santa Catalina Island, it is extremely important to balance the goals of the MLPA and the socioeconomic interests of the only island residential communities in the South Coast Study Region. This is true for both island residents and the hundreds of thousands of annual visitors to the island. Workgroup 2 attempted to balance these needs in designing two backbone MPAs: The Bird Rock SMCA/Blue Cavern SMR complex on the lee side and the Farnsworth SMCA on the back side of Catalina.

Island residents, especially those living in Two Harbors at the West End of Catalina, don't have the luxury of driving to open fishing grounds when nearby fishing areas are closed through the establishment of an MPA. Most island residents fish from small boats and skiffs. The designs of both backbone MPAs protects habitats and species most likely to benefit from an MPA while allowing recreational and commercial fishing for pelagics in deep water.

Catalina Island is host to three major fishing tournaments each year which have significant impacts to the economy of Avalon, Catalina Island's only incorporated city. The annual Church Mouse Tournament (100% tag and release) conservatively contributes $120,000 annually to Avalon's economy, including $60,000 in direct cash contributions to island non-profit organizations. The other two tournaments contribute approximately $40,000 each per year to Avalon's economy. Interestingly, 100% of these expenditures are made shoreside, NOT "from the dock seaward." Island residents have a real fear that were multiple, large MPAs established around the island, prohibiting recreational fishing, that these tournaments would disappear and their economic contributions with them.



Federal Military Closures at San Clemente:

Contained within the same bioregion, the waters encompassed by the San Clemente Island Safety Zones at Special Warfare Training Area 1 (SWAT 1) and Wilson Cove support a vast array of habitats and ecosystems, including rare 30-100m and 100-3000m hard bottom habitats. Rocky pinnacles, rocky shores, beaches, and soft bottom habitats across all depths are represented in these two areas. Together, SWAT 1 and Wilson Cove comprise over 36 sq nm of offshore, pristine habitats. While side-scan SONAR bathymetric substrate data is

only available for depths out to 100m, commercial and recreational fishing and diving operations relay first-hand information about the extensive rocky habitats, pinnacles and soft substrate in depths exceeding 100m. This information is invaluable in our assessment of the extensive presence of deep water hard bottom habitat. For years, the SWAT 1 offshore waters have served as vital sea urchin, sports fishing, lobster, and diving locations. The loss of this area to the public has significant economic effects, and must be considered in conjunction to public access and use restrictions implemented at Santa Catalina Island.

Surrounded by deep, Pacific canyons and steep drop-offs, San Clemente Island is an important upwelling location for cold, nutrient-rich, water. Consequently, waters around the island support some of the richest, most persistent Giant kelp beds (*Macrocystis pyrifera*) along the South Coast (Channel Island National Parks Kelp Forest Monitoring Program). Elk kelp occurs in both the Safety Zones, and eelgrass and surfgrass is located along the eastern side of the island. The Navy partners with the National Park Service to develop protocols for monitoring the kelp forests at San Clemente Island. The maximum extent of the beds is a good indicator of the extent of rocky bottom substrate. While kelp beds throughout the SOCAL Bight have suffered considerably during El Nino conditions, San Clemente Island beds have recovered far better than those of the northern Channel Islands, which suffer greatly from sea urchin grazing.

The rich kelp beds and offshore waters of support a rich array of species including, federally listed white, pink, and green abalones, California brown pelicans, and rare purple hydrocoral.

Rare purple hydrocoral (*Stylaster venustus*)

Waters in the SWAT 1 and Wilson Cove Safety Zones are included in the newly- designated coverage of the Integrated Natural Resources Management Program (INRMP) for San Clemente Island.
This pending military closure has a high level of protection because it is encompassed in a military safety zone that affords it monitoring and enforcement benefits.

By designing minimum sized SMCAs on each side of Catalina Island, Workgroup 2 has met minimum SAT size guidelines, has provided a high level of protection for species most likely to benefit, and has preserved the socioeconomic impacts so vitally important to the Catalina Island community.

3. Compliance with SAT Guidelines

a. Farnsworth SMCA: (10.18 sqmi.)

- Meets SAT size guidelines
- Meets SAT habitat replication guidance for:
  1. met Soft 100 - 200m
  2. met Soft 200 - 3000m
  3. met Soft 30 - 100m
  4. met Soft All Depths
  5. met Hard 30 - 100m
- Modestly meets Dept Fish and Game feasibility guidelines.
  1. Has a half minute by whole minute offshore corner that was tentatively by staff as a reasonable exception.

b. SWAT 1 FMC : (17.44 sqmi.)

- Meets SAT size guidelines
- Meets SAT habitat replication guidance for:
  1. met Surfgrass
  2. met Hard 30 - 100m
  3. met Hard 30m Proxy
  4. met Kelp Persistence
  5. met Rocky Shores

Data coverage is extremely limited here, especially for deeper habitats. It is probable that thresholds other key habitats are met

- Dept Fish and Game feasibility guidelines notwithstanding as enforcement is a Federal responsibility.

c. Wilson Cove FMC: (19.25 sqmi.)

- Meets SAT size guidelines
- Meets SAT habitat replication guidance for:
  1. met Surfgrass
  2. met Hard 30m Proxy
  3. met Kelp Persistence
  4. met Soft 30m Proxy
  5. met Rocky Shores
  6. met Beaches

Data coverage is extremely limited here, especially for deeper habitats. It is probable that thresholds other key habitats are met

- Dept Fish and Game feasibility guidelines notwithstanding as enforcement is a Federal responsibility.

4. Goals/Objectives Achieved

This proposed SMR/SMCA cluster is founded on the principals described in the Marine Life Protection Act of 1999. Specific goals and objectives supported in this SMR/SMCA cluster:

Goal 1. To protect the natural diversity and abundance of marine life,
and the structure, function, and integrity of marine ecosystems.

Objective 1 - Protect and maintain species diversity and abundance consistent with natural fluctuations, including areas of high native species diversity and representative habitats.

Objective 2 - Protect areas with diverse habitat types in close proximity to each other.

Objective 3 - Protect natural size and age structure and genetic diversity of populations in representative habitats.

Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.

Objective 2 - Sustain or increase reproduction by species likely to benefit from MPAs with emphasis on those species identified as more likely to benefit from MPAs and promote retention of large, mature individuals.

Objective 3 - Sustain or increase reproduction by species likely to benefit from MPAs with emphasis on those species identified as more likely to benefit from MPAs through protection of breeding, spawning, foraging, rearing or nursery areas or other areas where species congregate.

Objective 4 - Protect selected species and the habitats on which they depend while allowing: some commercial and/or recreational harvest of migratory, highly mobile, or other species; and other activities

Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.

Objective 1 - Sustain or enhance cultural, recreational, and educational experiences and uses (for example, by improving catch rates, maintaining high scenic value, lowering congestion, increasing size or abundance of species, and protection of submerged sites).

Objective 3 - Provide opportunities for collaborative scientific monitoring and research projects that evaluate MPAs that promote adaptive management and link with fisheries management, seabird and mammals information needs, classroom science curricula, cooperative fisheries research and volunteer efforts, and identifies participants.

Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value.

Objective 1 - Include within MPAs key and unique habitats identified by the MLPA Master Plan Science Advisory Team for this study region.

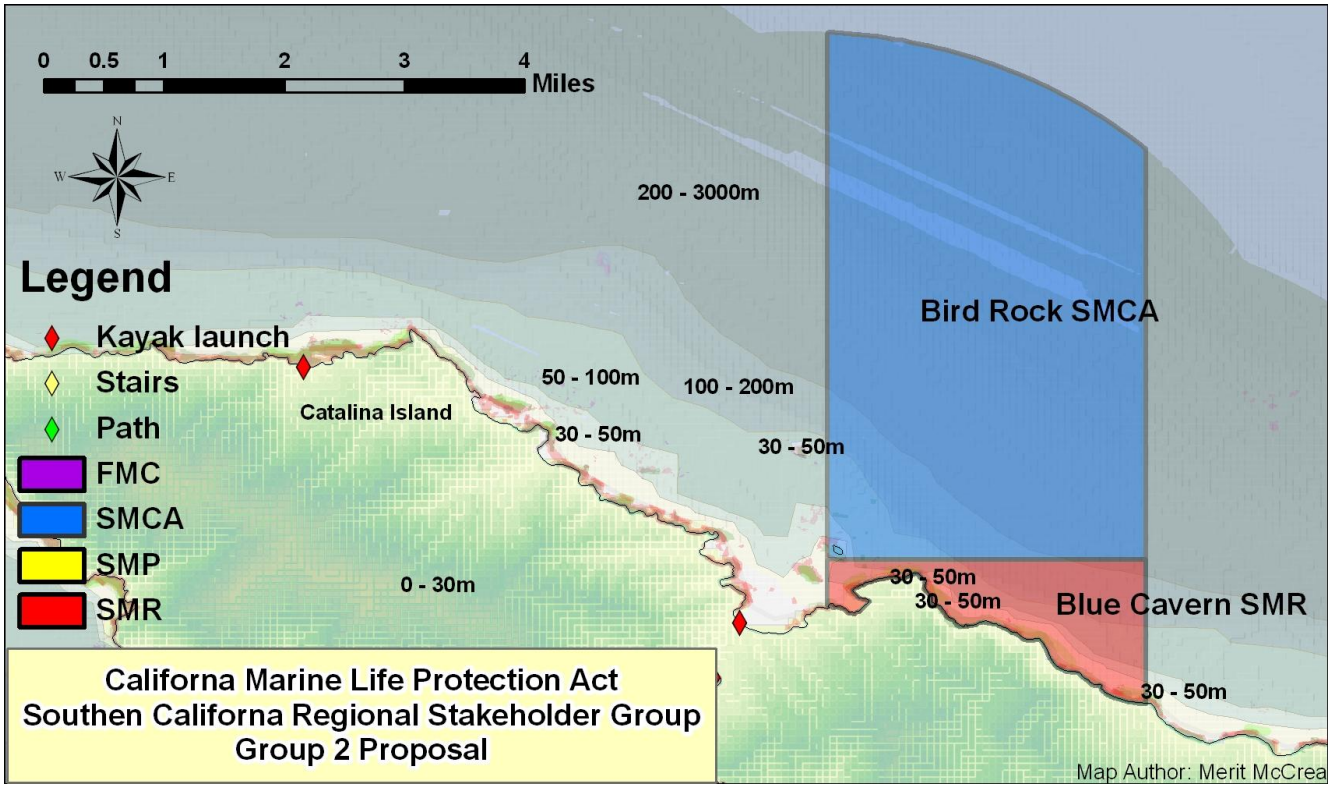
Objective 2 - Include and replicate to the extent possible [practicable], representatives of all marine habitats identified in the MLPA or the California Marine Life Protection Act Master Plan for Marine Protected Areas across a range of depths.

Goal 5. To ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.

Objective 1 - Minimize negative socio-economic impacts and optimize positive socio-economic impacts for all users including coastal dependent entities, communities and interests, to the extent possible, and if consistent with the Marine Life Protection Act and its goals and guidelines.

Goal 6. To ensure that the state's MPAs are designed and managed, to the extent possible, as a network.

Objective 3 - Ensure ecological connectivity within and between regional components of the statewide network



Blue Cavern State Marine Reserve (SMR)/Bird Rock State Marine Conservation Area (SMCA)

1. **Introduction**

The Blue Cavern SMR, clustered with offshore Catalina Isthmus Bird Rock SMCA, provides a backbone MPA for the leeside of Catalina Island. This MPA was carefully designed with 2 goals in mind: 1) expand the tiny existing USC Wrigley Marine Lab MPA to include the ecologically important offshore Bird Rock and extend the coastal reserve further east; and 2) balance (& improve in long term) recreational fishing opportunities for island residents and visitors to Isthmus area by providing open fishing areas around major mooring coves, piers, and reefs, including Isthmus Reef and Ship Rock. The SMCA affords a deep water area offshore the Science Center that allows for pelagic finfish fishing.

2. **Essential Facts: Blue Cavern State Marine Reserve/Bird Rock SMCA**
    a. Type of MPA: State Marine Reserve/SMCA
    b. Level of Protection: Very High/High
    c. SMR:
    d. Area bounded by the mean high tide and the following lines:
    e. 118º 29.300' W
       33º 27.000' N
       118º 27.000' W
    f. Boundary does not extend into deep water, so as to allow for valuable fishing opportunities.

g. Conservation Area Boundaries:
Area bounded by the state water boundary and the following lines:
118° 29.300' W
33° 27.000' N
118 degrees 27.000' W

h. Miles of Coverage:
- SMR – 1.34 sq miles
- SMCA – 8.97 sq miles
- Habitats/Features:
  1. Key habitats included:
     a. Soft 100 - 200m 1.08 sq miles
     b. Soft 200 - 3000m 7.48 sq miles
     c. Surfgrass 1.58 miles
     d. Soft 30 - 100m 0.87 sq miles
     e. Soft All Depths 9.72 sq miles
     f. Hard 30 - 100m 0.01 sq miles
     g. Hard 30m Proxy 0.88 miles
     h. Kelp Persistence 1.40 miles
     i. Soft 30m Proxy 1.89 miles
     j. Rocky Shores 1.65 miles
     k. Beaches 1.66 miles

i. Generally allowed takes:
- Blue Cavern SMR
  1. None, except by special permit
- Bird Rock SMCA
  1. ·Only those that will allow for a high level of protection for the species likely to benefit from spatially based protections at this scale (defined by the Science Advisory Team).

3. Site Rationale

The Northern region of Santa Catalina Island hosts highly diverse features including along-shore headland, coves, sea caves, walls, reefs and stable sand habitats; and unique offshore rocks and reefs. Proposed MPA contains key habitat giant kelp, elk kelp, and surfgrass. Will protect and enhance fishes and invertebrates, including sea bass, rockfishes, sheephead, kelp bass, halibut, abalone, lobster, cucumbers, mussels, limpets, and rock scallops. This is expansion of the existing reserve by USC Wrigley Marine Science Center, so great opportunity for enhanced research, monitoring, and education.

Design was carefully crafted to minimize impacts to sport fishers, especially by excluding Isthmus Reef and Ship Rock, along with Isthmus Cove, Fourth of July Cove, and Cherry Cove. To accomplish the necessary separation between Bird Rock and Isthmus Reef the boundary line between them runs due north of south tip of Big Fisherman Cove. Designed as cluster with Catalina Isthmus SMCA to allow for offshore fishing opportunities valuable to the economy of Catalina, but together achieve backbone high value MPA.

This SMR was designed as small as feasible to minimize socio-economic impacts.

Outside the SMR, the entire island region from Isthmus cove to the West End is open for recreational finfish enjoyment. Recommended for MPA status in Santa Catalina Island report by Parnell, Miller, & Dayton (2006). Great location for student and visitor education about values of Marine Protected Areas. Careful design of this and adjacent MPA balance protection and recreational fishing opportunities and provide unique opportunity for study of full take, fish only take, and no take effects on similar marine communities. Rocky intertidal community at Bird Rock has been monitored since 1982. Bird Rock subtidal sea palm, surfgrass, kelp, and sea wall habitats have been studied for decades, but without benefit of resource protection that would greatly increase the value of scientific studies.

4. Compliance with SAT Guidelines

a. Meets SAT size guidelines
b. Meets SAT habitat replication guidance for:
    - met Soft 200 - 3000m
    - met Surfgrass
    - met Soft All Depths
    - met Kelp Persistence
    - met Soft 30m Proxy
    - met Rocky Shores
    - met Beaches
c. Meets SAT guidelines for Spacing

5. Goals/Objectives Achieved

This proposed SMR/SMCA cluster is founded on the principals described in the Marine Life Protection Act of 1999. Specific goals and objectives supported in this SMR/SMCA cluster:

a. Goal 1. To protect the natural diversity and abundance of marine life,and the structure, function, and integrity of marine ecosystems.
    - Objective 1 - Protect and maintain species diversity and abundance consistent with natural fluctuations, including areas of high native species diversity and representative habitats.
    - Objective 2 - Protect areas with diverse habitat types in close proximity to each other.
    - Objective 3 - Protect natural size and age structure and genetic diversity of populations in representative habitats.
    - Objective 4 - Protect biodiversity, natural trophic structure and food webs in representative habitats.

b. Goal 2. To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.

- Objective 1 – Help protect or rebuild populations of rare, threatened, endangered, depressed, depleted, or overfished species, and the habitats and ecosystem functions upon which they rely.

- Objective 2 - Sustain or increase reproduction by species likely to benefit from MPAs with emphasis on those species identified as more likely to benefit from MPAs and promote retention of large, mature individuals.

- Objective 3 - Sustain or increase reproduction by species likely to benefit from MPAs with emphasis on those species identified as more likely to benefit from MPAs through protection of breeding, spawning, foraging, rearing or nursery areas or other areas where species congregate.

c. Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.
   - Objective 1 - Sustain or enhance cultural, recreational, and educational experiences and uses (for example, by improving catch rates, maintaining high scenic value, lowering congestion, increasing size or abundance of species, and protection of submerged sites).
   - Objective 2 - Provide opportunities for scientifically valid studies, including studies on MPA effectiveness and other research that benefits from areas with minimal or restricted human disturbance.

   - Objective 3 - Provide opportunities for collaborative scientific monitoring and research projects that evaluate MPAs that promote adaptive management and link with fisheries management, seabird and mammals information needs, classroom science curricula, cooperative fisheries research and volunteer efforts, and identifies participants.

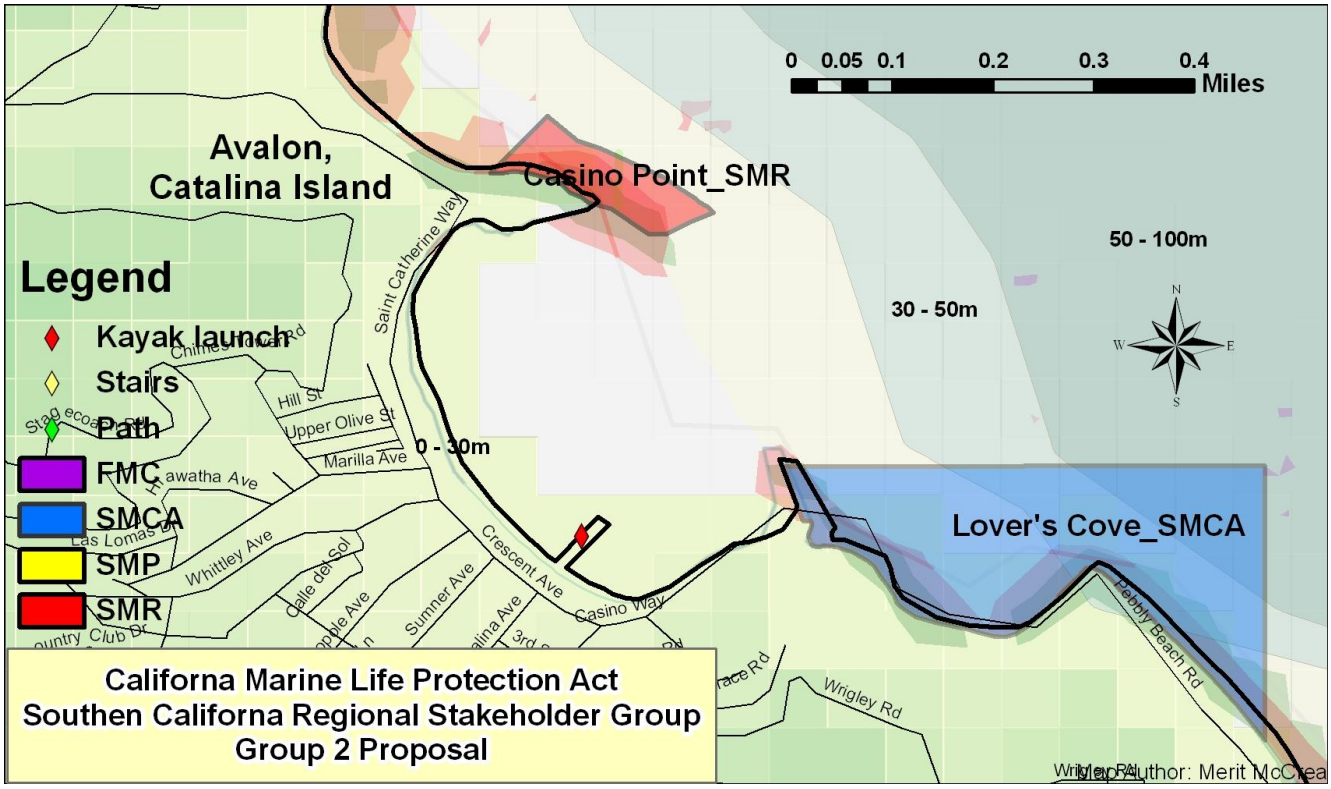
d. Goal 4. To protect marine natural heritage, including protection of representative and unique marine life habitats in California waters for their intrinsic value.
   - Objective 1 - Include within MPAs key and unique habitats identified by the MLPA Master Plan Science Advisory Team for this study region.
   - Objective 2 - Include and replicate to the extent possible [practicable], representatives of all marine habitats identified in the MLPA or the California Marine Life Protection Act Master Plan for Marine Protected Areas across a range of depths.

e. Goal 5. To ensure that California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.
   - Objective 1 - Minimize negative socio-economic impacts and optimize positive socio-economic impacts for all users including coastal

dependent entities, communities and interests, to the extent possible, and if consistent with the Marine Life Protection Act and its goals and guidelines.

- Objective 2 - Provide opportunities for interested parties to help develop objectives, a long-term monitoring plan that includes standardized biological and socioeconomic monitoring protocols, a long-term education and outreach plan, and a strategy for MPA evaluation.
- Objective 3 - Effectively use scientific guidelines in the California Marine Life Protection Act Master Plan for Marine Protected Areas.
- Objective 4 - Ensure public understanding of, compliance with, and stakeholder support for MPA boundaries and regulations.
- Objective 5 - Include simple, clear, and focused site-specific objectives/rationales for each MPA and ensure that site-level rationales for each MPA are linked to one or more regional objectives.

f. Goal 6. To ensure that the state's MPAs are designed and managed to the extent possible, as a network.
   - Objective 3 - Ensure ecological connectivity within and between regional components of the statewide network.
   - Objective 4 - Provide for protection and connectivity of habitat for those species that utilize different habitats over their lifetime.



Casino Point Marine Reserve (SMR)

1. **Introduction**
   This SMR has been requested by the residents of Catalina Island, and was designed to meet Goal 3 of MLPA, "Protect habitat and fish for non consumptive diver enjoyment." Essential Facts: Casino Point State Marine Reserve

2. **Essential Facts: Casino Point State Marine Reserve (SMR)**
   - Type of MPA: State Marine Reserve
   - Level of Protection: Very High
   - SMR:
     Area created by the mean high tide and existing buoys and lines maintained by the City of Avalon.
   - Miles of Coverage:
     - SMR – 0.01 sq miles
   - Habitats/Features:

habitat_name	value	units
Hard 30m Proxy	0.23	miles
Soft 30m Proxy	0.28	miles
Beaches	0.38	miles
Hardened Shores	0.09	miles
Rocky Shores	0.12	miles
Kelp Persistence	0.25	miles

Kelp Maximum	0.47	miles
Soft 30 - 100m	0.02	sq miles
Soft All Depths	0.04	sq miles

3. Site Rationale

Currently, divers in the City of Avalon Dive Park are at risk of injury due to fishing activities occurring in the area. The City of Avalon Dive Park is a very well known dive site, which is used extensively by the public. Boundaries are easily identified by buoys and lines maintained by the City of Avalon.

4. Compliance with SAT Guidelines

Does not meet SAT guidelines.

5. Goals/Objectives Achieved

Goal 3. To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.

Objective 1 - Sustain or enhance cultural, recreational, and educational experiences and uses (for example, by improving catch rates, maintaining high scenic value, lowering congestion, increasing size or abundance of species, and protection of submerged sites).

Objective 2 - Provide opportunities for scientifically valid studies, including studies on MPA effectiveness and other research that benefits from areas with minimal or restricted human disturbance.

Objective 3 - Provide opportunities for collaborative scientific monitoring and research projects that evaluate MPAs that promote adaptive management and link with fisheries management, seabird and mammals.

Lover's Cove State Marine Conservation Area (SMCA)

1. Introduction

Lover's Cove SMCA maintains existing MPA protection with more enforceable boundaries, and supports the objectives addressed in Goals 1, 2, 3 and 5. Catalina Island residents have requested the inclusion of this MPA in the adopted array. This MPA has existed for decades and is well accepted by the public.

2. **Essential Facts: Lover's Cove State Marine Conservation Area (SMCA)**

- Type of MPA: State Marine Conservation Area (SMCA)
- Level of Protection: High
- SMCA boundaries:

MPA modified to use straight lines to enhance enforceabilityt.
Area below the mean high tide and the following lines:
33 degrees 20.700 minutes N
118 degrees 18.900 minutes W
Includes seaward side of Cabrillo Mole

- Miles of Coverage:
  - 0.06 sq miles
- Habitats/Features:
  - Soft 30m proxy
  - Soft 30 -100m
  - Soft all depths
  - Rocky shores
  - Hard 30m proxy
  - Hard 30 – 100m
  - Hardened shores
  - Kelp persistence
  - Kelp maximum
  - Rocky shores
- Allowed harvest:

• Giant kelp	Hand harvest	commercial
• Finfish	Hook and line	commercial
• Pier fishing (any target)	Hook and line	recreational

- Other: Anchoring is prohibited.

3. Site Rationale

Design consideration - creates straight lines to address feasibility concerns over odd shape that previously existed. New shape includes the seaward side of Cabrillo Mole and allows pier fishing from the Mole.

4. Compliance with SAT Guidelines

Does not meet SAT guidelines.

5. Goals/Objectives Achieved

Goal 1

To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.

Lover's Cove State Marine Conservation Area (SMCA)

1. Introduction

Lover's Cove SMCA maintains existing MPA protection with more enforceable boundaries, and supports the objectives addressed in Goals 1, 2, 3 and 5. Catalina Island residents have requested the inclusion of this MPA in the adopted array. This MPA has existed for decades and is well accepted by the public.

2. Essential Facts: Lover's Cove State Marine Conservation Area (SMCA)

Type of MPA: State Marine Conservation Area (SMCA)

- Level of Protection: High
- SMCA boundaries:

  MPA modified to use straight lines to enhance enforcement.
  Area below the mean high tide and the following lines:
  33 degrees 20.700 minutes N
  118 degrees 18.900 minutes W
  Includes seaward side of Cabrillo Mole
- Miles of Coverage:
  - 0.06 sq miles
- Habitats/Features:
  - Soft 30m proxy
  - Soft 30 -100m
  - Soft all depths
  - Rocky shores
  - Hard 30m proxy
  - Hard 30 – 100m
  - Hardened shores
  - Kelp persistence
  - Kelp maximum
  - Rocky shores

3. Site Rationale

Design consideration - creates straight lines to address feasibility concerns over odd shape that previously existed. New shape includes the seaward side of Cabrillo Mole and allows pier fishing from the Mole.

4. Compliance with SAT Guidelines

Does not meet SAT guidelines.

5. Goals/Objectives Achieved

Goal 1

To protect the natural diversity and abundance of marine life, and the structure, function, and integrity of marine ecosystems.

- Objective 1 - Protect and maintain species diversity and abundance consistent with natural fluctuations, including areas of high native species diversity and representative habitats.
- Objective 5 - Promote recovery of natural communities from disturbances, both natural and human induced, including water quality.

Goal 2
To help sustain, conserve, and protect marine life populations, including those of economic value, and rebuild those that are depleted.

- Objective 2 - Sustain or increase reproduction by species likely to benefit from MPAs with emphasis on those species identified as more likely to benefit from MPAs and promote retention of large, mature individuals.

Goal 3
To improve recreational, educational, and study opportunities provided by marine ecosystems that are subject to minimal human disturbances, and to manage these uses in a manner consistent with protecting biodiversity.

- Objective 1 - Sustain or enhance cultural, recreational, and educational experiences and uses (for example, by improving catch rates, maintaining high scenic value, lowering congestion, increasing size or abundance of species, and protection of submerged sites).

- Objective 2 - Provide opportunities for scientifically valid studies, including studies on MPA effectiveness and other research that benefits from areas with minimal or restricted human disturbance.

- Objective 3 - Provide opportunities for collaborative scientific monitoring and research projects that evaluate MPAs that promote adaptive management and link with fisheries management, seabird and mammals information needs, classroom science curricula, cooperative fisheries research and volunteer efforts, and identifies participants.

Goal 5
To ensure that south coast California's MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based on sound scientific guidelines.

- Objective 1 - Minimize negative socio-economic impacts and optimize positive socio-economic impacts for all users including coastal dependent entities, communities and interests, to the extent possible, and if consistent with the Marine Life Protection Act and its goals and guidelines.
- Objective 2 - Provide opportunities for interested parties to help develop objectives, a long-term monitoring plan that includes standardized biological and

socioeconomic monitoring protocols, a long-term education and outreach plan, and a strategy for MPA evaluation.

- Objective 4 - Ensure public understanding of, compliance with, and stakeholder support for MPA boundaries and regulations.

6. Other Regulated Activities

Anchoring is prohibited.

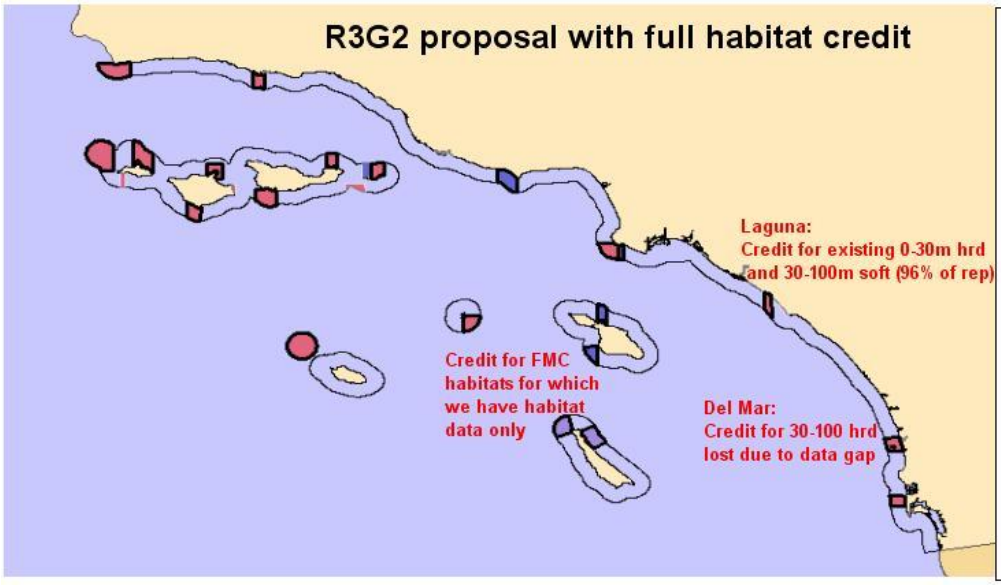
Consideration of Existing State MPAs

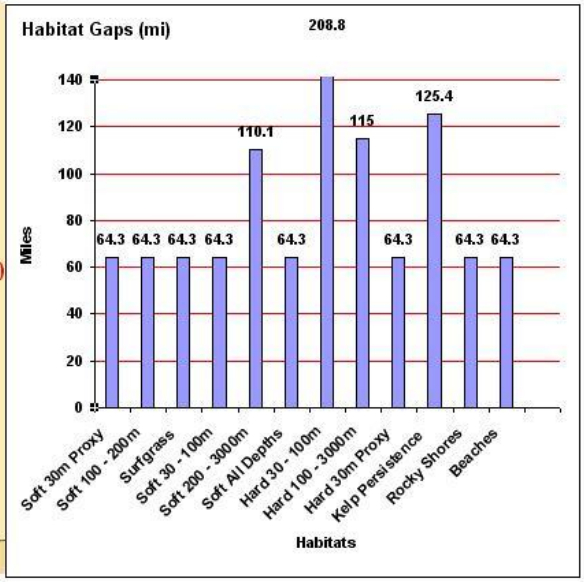
Existing MPA	Retain (no changes to boundaries or regulations)	Modify (included with boundary or regulation change)	Remove (not included)	Reason for Decision
Refugio SMCA			Removed	The current Refugio MPA has existed for decades, but has not been vigorously disclosed to the public or enforced at any time. Because it has not functioned as a legitimate MPA to date and does not meet SAT guidelines or CDFG feasibility guidelines, it should be eliminated as an MPA. A thorough analysis of modifying the MPA to meet MLPA goals and objectives was found to be scientifically unnecessary, not beneficial to the overall array, and socio-economically unacceptable. State Parks has a lease on the seabed from the state lands commission for this area and can protect the archaeological resources of the seabed by other means while still encouraging its use be recreational divers.
Goleta Slough SMP		Changed to Goleta SMR		The proposed Goleta Slough SMR is home to a persistent run of endangered steelhead trout, primarily up San Jose Creek. Its brackish, intertidal zone teems with a diverse assemblage of mollusks, crabs, grunion, tidewater gobies, and sticklebacks. Non-native mullet are observed along with major seabird feeding and nesting areas. An effort to remove and replace non-native plants along its banks is ongoing.
Big Sycamore Canyon SMR			Removed	The close proximity of the new Point Dume SMCA and the existing Proposition 132 (Sycamore Canyon) SMR renders the Sycamore Canyon SMR redundant, unnecessary and without high conservation value. TO retain it would compound socioeconomic impacts of the Point Dume SMCA with little additional ecological contribution to the region's network of marine reserves. As such, removal of the Sycamore Canyon SMR is highly recommended.
Abalone Cove SMP		Changed to Abalone Cove SMCA		Provide higher level of protection plus a more feasible overall shape.
Point Fermin SMP			Removed	Removed per guidance from California Department of Fish and Game and Parks & Recreation. Orginally intended to protect tide pools but now redundant due to enforcement and control efforts by The City of San Pedro and the Cabrillo Marine Aquarium. Public Access to the tide pools is limited to eduactional and research purposes.
Bolsa Chica SMP		Changed to Bolsa Chica SMCA		Better reflects the uses and protections of the area and intent of state parks.
Upper Newport Bay SMP		Changed to Upper Newport SMCA		Boundary change better meets DFG feasibility - easily enforceable. Change to conservation area reflects uses and intent of state parks.
Robert E Badham SMCA		Included in Laguna North SMCA		Consolidated into one MPA based on advice from DFG and managing entities. Simplified and made uniform allowed uses.

Crystal Cove SMCA		Included in Laguna North SMCA		Consolidated into one MPA based on advice from DFG and managing entities. Simplified and made uniform allowed uses.
Irvine Coast SMCA		Included in Laguna North SMCA		Consolidated into one MPA based on advice from DFG and managing entities. Simplified and made uniform allowed uses.
Heisler Park SMR		Included in Laguna SMR		Incorporated into a larger, backbone SMR to expand scope of protection.
Laguna Beach SMCA		Included in Laguna South SMCA		Consolidated into one MPA based on advice from DFG and managing entities. Simplified and made uniform allowed uses.
South Laguna Beach SMCA		Included in Laguna South SMCA		Consolidated into one MPA based on advice from DFG and managing entities. Simplified and made uniform allowed uses.
Niguel SMCA		Included in Laguna South SMCA		Consolidated into one MPA based on advice from DFG and managing entities. Simplified and made uniform allowed uses.
Dana Point SMCA		Included in Laguna South SMCA		Consolidated into one MPA based on advice from DFG and managing entities. Simplified and made uniform allowed uses.
Doheny SMCA			Removed	Did not meet feasibility guidelines and provided a low level of protection.
Doheny Beach SMCA			Removed	Did not meet feasibility guidelines and provided a low level of protection.
Buena Vista Lagoon SMP[1]			Removed	Removed per guidance from California Department of Fish and Game
Agua Hedionda Lagoon SMR			Removed	Conflicts with competing existing uses, which were incompatible with MPA.
Batiquitos Lagoon SMP			Removed	Existing management provides protection. An MPA would not provide further protection. Management opposes this MPA
Encinitas SMCA			Removed	Did not meet feasibility guidelines and only provided the illusion of protection.
Cardiff-San Elijo SMCA			Removed	Did not meet feasibility guidelines and only provided the illusion of protection.
San Elijo Lagoon SMP			Removed	Conflicts with water treatment facility needs.
San Dieguito Lagoon SMP		Changed to San Dieguito SMR		Support goals of the restoration effort here and provide additional protection for estuary.
San Diego-Scripps SMCA			Removed	Provides only illusion of protection, and to increase feasibility would have high socioeconomic costs.
La Jolla SMCA		Changed to La Jolla SMR		Provides higher level of protection for included habitats and maintained boundaries that are well known, marked, and enforced.
Mia J Tegner SMCA		Changed to Cabrillo SMR		Supports the goals of the national monument and increases protection for this area. Expands size and cleans up boundaries to make more enforceable.
Catalina Marine Science Center SMR		Changed to Blue Cavern SMR		Expand area and enlarge MPA. Boundaries made more enforceable. Recognize high level of monitoring.

Farnsworth Bank SMCA		Changed to Farnsworth SMCA		Expanded size to create a backbone MPA with higher levels of protection for the included habitats. Regulations provide a higher level of protection.
Lover's Cove SMCA		Changed to Lovers Cove SMCA (boundaries and regulations		Cleaned up boundaries and regulations to make more enforeable at request of DFG.
Arrow Point to Lion Head Special Closure			Removed	MPA did not meet feasibility requirements. Close to other proposed MPAs. Enhancing MPA protection would have closed the entrance to Two Harbors.

Coastal Connectivity Analysis: Greatest gaps between MPAs with high levels of protection for replicates of key habitats having at least 90 % of the species found in that key habitat type. (Protected habitats at the offshore islands are not considered within this analysis)





The backbone MPAs that have qualifying replicates are shown with dark borders. Certain data issues have to be resolved favorably for the indicated MPAs as shown in order for these results to apply.

Number of Habitat Replicates for each Bioregion at High Level of Protection

Habitat	East Channel Islands	North Mainland	Mid Channel Islands	West Channel Islands	South Mainland	Total
Soft 30m Proxy	2	3	3	3	3	14
Soft 100 - 200m	1	3	1	3	3	11
Surfgrass	3	3	3	3	4	16
Soft 30 - 100m	1	3	3	4	3	14
Soft 200 - 3000m	2	1	1	0	3	7
Soft All Depths	2	3	2	4	3	14
Hard 30 - 100m	2	1	1	4	2	10
Hard 100 - 3000m	0	1	0	1	1	3
Hard 30m Proxy	2	3	1	3	3	12
Kelp Persistence	3	3	1	3	1	11
Rocky Shores	3	3	4	3	3	16
Beaches	2	3	1	2	3	11